



PROJECT MANUAL

FOR

**FIGURES PARK
COMBO FIELD IMPROVEMENTS
658 Donald Street C
Mobile, Alabama 36617
Project #PR-066-22**

&

**TRINITY GARDENS PARK
COMBO FIELD IMPROVEMENTS
3100 Bank Ave.
Mobile, Alabama 36617
Project #PR-040-22**

Advertisement Date: September 10, 2023

**City of Mobile
Architectural Engineering Department
205 Government Plaza
P.O. Box 1827
Mobile, Alabama 36633-1827**

Prepared By:

**Espalier, LLC
P.O. Box 1247
Fairhope, Alabama 36533
251-454-3500**

**S.E. Civil Engineering & Survey
9969 Windmill Road
Fairhope, AL 36532**

Bid Date: September 27, 2023

Figures Park
Combo Field Improvements
Mobile, AL - PR-066-22
&
Trinity Park
Combo Field Improvements
Mobile, AL - PR-040-22

DOCUMENT 000107 - SEALS PAGE

1.1 DESIGN PROFESSIONALS OF RECORD

A. Landscape Architect:



B. Civil Engineer:



END OF DOCUMENT 000107

INDEX TO DOCUMENTS

SECTION DOCUMENT NAME

BIDDING AND CONTRACT REQUIREMENTS:

Section 00100	Invitation to Bid
Section 00200	Instructions to Bidders – AIA Document A701
Section 00300	Supplementary Instructions to Bidders
Section 00400	<u>Bid Form – Figures Park</u> Sales Tax Form C-3A Supplier Diversity Subcontracting & Major Supplier Plan (required for projects \$250,000 or greater)
	<u>Bid Form – Trinity Gardens Park</u> Sales Tax Form C-3A Supplier Diversity Subcontracting & Major Supplier Plan (required for projects \$250,000 or greater)
Section 00500	Standard Form of Agreement Between Owner and Contractor – AIA Document A101 Exhibit 'A'
Section 00600	Bonds, Certificates and Affidavits Performance Bond (Owner's modified form) Labor and Material Payment Bond (Owner's modified form) E-verify Documentation (Sample) Application and Certification for Payment - AIA Document G702 and AIA Document G703 Certificate of Substantial Completion – AIA Document G704 Contractor's Affidavit of Payment of Debits & Claims - AIA Document G706 Contractor's Affidavit of Release of Liens - AIA Document G706A Consent of Surety to Final Payment - AIA Document G707 W-9 Request for Taxpayer Identification Number and Certification and City of Mobile Vendor Information Form
Section 00700	General Conditions of the Contractor for Construction - AIA Document A201

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Section 01010	Summary of the Work
Section 01210	Allowances
Section 01220	Unit Prices
Section 01310	Project Management & Coordination

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Section 01320	Construction Progress Documentation
Section 01330	Submittal Procedures
Section 01600	Product Requirements
Section 01700	Execution Requirements
Section 01710	Closeout Procedures
Section 017823	Operation & Maintenance Data
Section 017839	Project Record Documents

FIGURES PARK:

DIVISION 02: SITE CONSTRUCTION

Section 02230	Site Clearing
Section 02300	Earthwork
Section 02410	Site Demolition
Section 02751	Cement Concrete Pavement
Section 02764	Pavement Joint Sealants

DIVISION 03: CONCRETE

Section 033000	Cast in Place Concrete Structural Concrete
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DIVISION 09: FINISHES

Section 09900	Painting
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DIVISION 11: EQUIPMENT

Section 116833	Athletic Field Equipment
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DIVISION 32: EXTERIOR IMPROVEMENTS

Section 328400	Playing Field Irrigation
Section 329100	Playing Field Construction
Section 329113	Soil Preparation
Section 329200	Playing Field Sodding

DRAWINGS:

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1.1	Survey
1.2	Existing Conditions / Demolition
C01	Erosion & Sediment Control Plan
C02	Civil Construction Details
L-1.2	Field Layout Plan
L-1.3	Field Grading Plan
L-1.4	Field Irrigation Plan
L-1.5	Painting Plan
L-5.0	Field Details
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TRINITY GARDENS PARK:

DIVISION 02: SITE CONSTRUCTION

Section 02230 Site Clearing
Section 02300 Earthwork
Section 02410 Site Demolition
Section 02630 Storm Drainage
Section 02751 Cement Concrete Pavement
Section 02764 Pavement Joint Sealants

DIVISION 03: CONCRETE

Section 033000 Cast in Place Concrete
Structural Concrete

DIVISION 11: EQUIPMENT

Section 116833 Athletic Field Equipment

DIVISION 32: EXTERIOR IMPROVEMENTS

Section 328400 Playing Field Irrigation
Section 329100 Playing Field Construction
Section 329113 Soil Preparation
Section 329200 Playing Field Sodding

DRAWINGS:

1.0 Cover Sheet
1.1 Survey
1.2 Existing Conditions / Demolition
C01 Grading & Drainage Plan
C02 Erosion & Sediment Control Plan
C03 Civil Details
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SECTION 00100
INVITATION TO BID

You are invited to submit a sealed bid for construction of the following facility:

PROJECT NAME: Figures Park Combo Field Improvements
PROJECT LOCATION: 658 Donald St. C, Mobile, Alabama 36617
PROJECT NUMBER: PR-066-22

&

PROJECT NAME: Trinity Gardens Park Combo Field Improvements
PROJECT LOCATION: 3100 Bank Ave., Mobile, Alabama 36608
PROJECT NUMBER: PR-040-22

1 BID DATE:

- A. Sealed Bids will be received and clocked in until **2:15 PM local time, Wednesday, the 27th day of September, 2023** in the office of the City Clerk, Government Plaza, 9th Floor South Administrative Tower, 205 Government Street, Mobile, Alabama 36602.
- B. All Bids not clocked in at the City Clerk's Office prior to the time specified, or Bids received after the specified time, will be automatically rejected and returned immediately, unopened.
- C. Bids will be publicly opened and read at 2:30 PM local time, in the Atrium Lobby of Government Plaza.

2 SPECIFICATIONS AND DRAWINGS:

- A. Specifications and Drawings are on file and may be examined and obtained from the following location:
 - a. <http://www.cityofmobile.org/bids/>
- B. Bidders shall use complete sets of Bid Documents in preparing their bid. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bid Documents.
- C. Addenda will be issued via City of Mobile website.
- D. **This is a tax exempt project and shall be certified by the requirements of the Alabama Department of Revenue. Bidders shall NOT include sales and use taxes with their bid amounts. Bidders shall complete the Sales Tax Form C-3A and include it as an attachment to their Bid Form (see Section 00400).**

BID SURETY: Required on Bids \$10,000.00 or more

- A. A Cashier's Check drawn on an Alabama bank or Bid Bond payable to Owner, City of Mobile, in the amount of 5% of the Base Bid, but in no event more than \$10,000.00 is required to accompany Bid.
- B. Bid Bond must be signed or countersigned by a licensed resident agent of the State of Alabama.
- C. No Bid may be modified, withdrawn, or canceled for a period of sixty (60) days after the time designated above for receipt of bids.

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D. The City of Mobile will have sixty (60) days from the bid opening date to award contract.

3 SURETY QUALIFICATIONS:

- A. A Surety authorized to do business in the State of Alabama must issue Bonds.
- B. If the Base Bid is \$50,000 or more, the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best Key Rating Guide Property-Casualty published by Alfred M. Best Company, Inc.

4 IRREGULARITIES AND REJECTION:

- A. The City of Mobile reserves the right to waive irregularities in the Bid and in Bidding, and to reject any or all Bids.

5 BIDDER QUALIFICATIONS:

- A. Bids for Work costing \$50,000 or more must be licensed pursuant to current Alabama law and of classifications compliant with the State of Alabama Licensing Board for General Contractors. Note that if the contract amount is \$10,000 or greater, both a Performance Bond and a Labor and Material Payment Bond shall be required.
Before Bidding, Contractor shall verify their license classification of their General Contractors license with the State of Alabama Licensing Board for General Contractors to verify classification is acceptable to perform 51% of the Scope of Work.
- B. In case of a joint venture of two or more Contractors, the amount for the bid shall be within the maximum bid limitations as set by the State of Alabama Licensing Board for General Contractors of at least one of the partners to the joint venture.

6 NON-RESIDENT CONTRACTORS:

- A. Except for contracts funded in whole or part with funds received from a federal agency, preference shall be given to resident Contractors on the same basis as the nonresident Contractor's state awards contracts to Alabama Contractors bidding in similar circumstances.
- B. Nonresident Bidders shall, prior to entering into a Contract for Construction, furnish a certificate from the Secretary of State of Alabama showing that it is qualified to transact business in Alabama and shall be registered with Alabama Department of Revenue.

7 PRE-BID CONFERENCE:

- A. A Pre-Bid Conference shall be held on **September 14th, 2023, in the Architectural Engineering Department conference room No. 558, Government Plaza, 5th Floor, South Administrative Tower at 10:30 AM local time.** The conference will include a walkthrough of the site location.
- B. A representative of the contractor is recommended to be in attendance throughout the meeting and sign-in.
- C. Minutes of this conference will be made as an Addendum for the project.
- D. Owner and Consultant will schedule a walk the of site if required.

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8 BID SUBMITTAL:

- A. Bids must be submitted on copies of the Bid Forms furnished in the bidding documents.
- B. Bid, with Bid Security, Sales Tax Form C-3A and other supporting data specified, shall be contained in a sealed, opaque envelope, approximately 9x12 inches or larger and be marked on the outside with the words:

"SEALED BID FIGURES PARK – COMBO FIELD IMPROVEMENTS - PR-066-22"

and/or

"SEALED BID TRINITY GARDENS PARK – COMBO FIELD IMPROVEMENTS - PR-040-22"
- C. The Bid envelope shall be clearly addressed to the Owner as indicated on the Bid Form and include the bid date, the name, address and State License number and classification of the Bidder issued by the State of Alabama Licensing Board for General Contractors.
- D. All Bids of \$50,000 or more must include the bidder's State of Alabama General Contractor's License information written on the outside of the bid envelope. Any bid submitted without such license information may be rejected and returned to the bidder unopened.
- E. In addition, in large letters on both front and back of envelope, write the following: **DO NOT OPEN UNTIL TWO-THIRTY PM, SEPTEMBER 27, 2023.**
- F. For a bid to be valid it shall be delivered at designated location prior to time and date for receipt of Bids indicated in INVITATION TO BID, or prior to any extension thereof issued to Bidders. After that time no Bid will be received or withdrawn.
- G. When sent by mail, preferably special delivery, express service, or registered mail, the sealed Bid, marked as indicated above, shall be enclosed in another envelope for mailing such that the exterior mailing container or envelope may be opened without revealing the contents of the Bid. It is the Contractors responsibility to assure delivery of the bid to the City Clerk's Office prior the time and date established.

9 EQUAL OPPORTUNITY:

- A. The City of Mobile, Alabama is an Equal Opportunity Employer and requires that all Contractors comply with the Equal Employment Opportunity laws and the provisions of the Bid Documents in this regard.
- B. The City of Mobile also encourages and supports the utilization of Minority Business Enterprises on these and all other publicly solicited Bids, and shall be in compliance with the City of Mobile's Minority Utilization Plan as adopted by the City Council.
- C. Contractor shall provide an appropriately completed copy of the "City of Mobile Subcontracting and Major Supplier Plan" in the envelope with their Bid Form if total base bid is \$250,000 or greater. Form shall document DBE Subcontractors participating in the project and, should the total % of DBE participation not meet the 15% minimum, all efforts to obtain DBE Subcontractors shall be documented on or attached to the DBE Form when submitted. During construction, contractors are required to submit a "DBE Utilization Report" with every Pay Application.

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- D. Contractors should contact the City of Mobile, Supplier Diversity Manager for assistance with DBE Subcontractor information and any questions regarding the DBE Compliance Forms. Contact Archnique Kidd at 251-208-7967.

10 ADDITIONAL BIDDING PROCEDURES:

- A. Refer to the complete information in the Bid Documents prior to submitting a bid. Additional Bidding Procedure information is contained therein, particularly in the specification Section 00200 "Instructions to Bidders - AIA Document A701" and in the specification Section 00300 "Supplementary Instructions to Bidders".

12 STATE OF ALABAMA IMMIGRATION ACT

"The State of Alabama, under the Beason-Hammon Alabama Taxpayer and Citizen Protection Act, Act No. 2011-535, Alabama Code Section 31-13-1, et. Seq., requires:

- A. That the Contractor shall be enrolled in the E-Verify Program, shall participate in that Program during the performance of the contract, and shall verify the immigration status of every employee who is required to be verified, according to the applicable federal rules and regulations; and
- B. That it will attach to the contract the company's documentation of enrollment in E-Verify.
- C. The subcontractor must also enroll in the E-Verify Program prior to performing any work on the contract and shall attach to its sworn affidavit documentation establishing that the subcontractor is enrolled in the E-Verify Program.

13. PUBLIC CONTRACTS WITH ENTITIES ENGAGING IN CERTAIN BOYCOTT ACTIVITIES

- A. By signing this contract, Contractor further represents and agrees that it is not currently engaged in, nor will it engage in, any boycott of a person or entity based in or doing business with a jurisdiction with which the State of Alabama can enjoy open trade.

END OF SECTION 00100

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DOCUMENT 00200 - INSTRUCTIONS TO BIDDERS

1.1 INSTRUCTIONS TO BIDDERS

A. AIA Document A701, "Instructions to Bidders," is hereby incorporated into the Procurement and Contracting Requirements by reference.

1. A copy of AIA Document A701, "Instructions to Bidders," is bound in this Project Manual.

END OF DOCUMENT 00200



AIA® Document A701® – 2018

Instructions to Bidders

for the following Project:
(Name, location, and detailed description)

Figures Park – Combo Field Improvements
658 Donald Street C
Mobile, Alabama 36617
and
Trinity Gardens Park – Combo Field Improvements
3100 Bank Avenue
Mobile, Alabama 36617

THE OWNER:
(Name, legal status, address, and other information)

City of Mobile
PO Box 1827
Mobile, Alabama 36633-1827

THE ARCHITECT:
(Name, legal status, address, and other information)

Espalier, LLC
P.O. Box 1247
Fairhope, Alabama 36533

TABLE OF ARTICLES

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- 2 **BIDDER’S REPRESENTATIONS**
- 3 **BIDDING DOCUMENTS**
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- 5 **CONSIDERATION OF BIDS**
- 6 **POST-BID INFORMATION**
- 7 **PERFORMANCE BOND AND PAYMENT BOND**
- 8 **FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**
- 9 **NONDISCRIMINATION**
- 10 **USE OF DOMESTIC PRODUCTS**

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612™–2017, Owner’s Instructions to the Architect, Parts A and B will be completed prior to using this document.

11	PREFERENCE TO RESIDENT CONTRACTORS
12	PRE-BID REQUIREMENTS
13	POST-BID REQUIREMENTS



ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents. A Bidder must be licensed by the State Licensing Board for General Contractors if the amount for the Contract exceeds the amount established by said Board.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work. A Sub-bidder performing Work must be licensed by the State Licensing Board for General Contractors if the Sub-bidders' contract amount exceeds that established by said Board.

- 1.10 A non-resident Bidder or Sub-bidder is one who
- a. Is neither organized nor existing under the laws of the State of Alabama
 - b. nor maintains its principal place of business in the State of Alabama.

A non-resident contractor who has maintained a permanent branch office within the State of Alabama for at least five (5) continuous years shall not thereafter be deemed to be a non-resident contractor so long as such contractor continues to maintain a branch office within Alabama.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

- .1 the Bidder has read and understands the Bidding Documents;
- .2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
- .3 the Bid complies with the Bidding Documents;
- .4 the Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents;
- .5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and
- .6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

§ 2.2 The Bidder is licensed by the State Licensing Board for General Contractors and the amount Bid does not exceed the Bid Limit stipulated in the Bidder's License and by the City of Mobile.

§ 2.3 Each and every Contractor belonging to or comprising a part of any entity that is bidding as a joint venture or association involving two or more contractors is licensed by the State Licensing Board for General Contractors and that the amount Bid does not exceed the Bid limit stipulated in at least one of their licenses.

§ 2.4 Any non-resident Bidder is authorized by the Secretary of State of Alabama and is registered with Alabama Department of Revenue to transact business in Alabama.

§ 2.5 Joint Ventures or Associations of Contractors, whether the same are Bidders or Subcontractors of Bidders, will remain in existence until all insurance and warranty requirements for the Project have been fulfilled.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.

(Paragraphs deleted)

§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

§ 3.1.4 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

§ 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

§ 3.2 Modification or Interpretation of Bidding Documents

§ 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least five (5) calendar days prior to the date for receipt of Bids.

(Paragraphs deleted)

§ 3.2.3 Modifications and interpretations of the Bidding Documents shall be made by Addendum. Modifications and interpretations of the Bidding Documents made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.2.4 The Contract Drawings and Specifications are intended to cooperate and agree, but should conflicts or difference be found to exist between the requirements within either and clarification has not been obtained in accordance with the above procedure prior to Bidding, then the most costly and/or restrictive interpretation by the decision of the Architectural Engineering Department Director will be final.

§ 3.3 Substitutions

§ 3.3.1 The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.

§ 3.3.2 Substitution Process

§ 3.3.2.1 Written requests for substitutions shall be received by the Architect at least fifteen (15) calendar days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

§ 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.

§ 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

§ 3.3.3 The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.4 If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3.5 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.3.6 See Division One Section "Substitution Procedures", if included in Specification.

§ 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.

(Paragraphs deleted)

§ 3.4.2 Addenda will be available where Bidding Documents are on file.

§ 3.4.3 Addenda will be issued no later than two (2) days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 Preparation of Bids

§ 4.1.1 Bids shall be submitted on the forms included with or identified in the Bidding Documents. No bid will be considered unless made out and submitted on a copy of the Bid Form, Section 00410. Additional Bid Forms will be furnished to prospective Bidders upon request.

§ 4.1.2 All blanks on the bid form shall be legibly executed. Paper bid forms shall be executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on paper bid forms must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form.

Unit Prices: Supply requested Unit Prices where shown on the Bid Form, Such Unit Prices shall be used to adjust the Contract Amount where the quantities shown on the Drawings and/or Specifications do not reflect amounts required for

completion of the work. Where Completion of the Work requires quantities in excess of those shown on the drawings and specifications, unit prices shall be used to compute an extra payment to the Contractor. Where completion of work required quantities less than those on the Drawings and/or specifications, unit prices shall be used to compute a credit to the Owner.

Contingency Allowance: As shown on the Bid Form, Contractor shall add the amount of the contingency allowance to the Base Bid to derive the Total Bid. The contingency allowance shall cover cost of material, labor, overhead, profit and other expenses for complete installation of items of additional work as required for a complete functional project. The contingency allowance shall be used to fund unforeseen conditions not covered in the construction documents and shall be subject to the provisions of change orders. Upon the completion of work any unused portion of the contingency allowance shall be credited to the Owner by change order.

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall neither make additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

§ 4.1.8 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security if so required in the Bidding Documents:
(Insert the form and amount of bid security.)

The Bidder shall provide a Bid Security in the form of a cashier's check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation, or a Bid Bond. Bid Security is required for bids exceeding \$10,000.00. Bid Security shall be in the amount of 5% of the TOTAL BID, but in no event more than \$10,000.00.

§ 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.

§ 4.2.3 If a surety bond is required as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 4.2.4 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected.

§ 4.2.5 Bonds must be issued by a Surety authorized to do business in the State of Alabama. A Performance Bond and a Labor and Material Payment Bond are required for projects exceeding \$10,000.00. If the project cost is \$50,000.00 or more, the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best's Key Rating Guide Property-Casualty published by Alfred M. Best Company, Inc.

§ 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below:

(Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)

Submission of Bid shall be as stated in Section 00100, Invitation to Bid, Paragraph 9, titled "Bid Submittal".

(Paragraph deleted)

§ 4.3.3 Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted and will be returned unopened.

§ 4.3.4 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

(Paragraphs deleted)

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

§ 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

§ 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. Unless otherwise prohibited by law, the Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's best interests.

§ 5.3.2 The Owner shall accept Alternates in the order listed on the Bid Form to determine the lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305™, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

(Paragraphs deleted)

§ 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, within three (3) calendar days or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and

- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.
- .4 The name of the Project Superintendent and Project Manager together with the resume of qualifications of each;
- .5 Nonresident Contractor shall submit a letter from an attorney as required by Subparagraph 11.1.2 below and;
- .6 Engineering Firm or Testing Laboratory for testing as specified.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

§ 6.3.5 The Contractor shall, within ten (10) calendar days of receiving Contract Forms for signature, furnish to the Owner the following items, along with the signed contract, or the Bid Security will be forfeited automatically without further delay:

- .1 A Signed Construction Contract;
- .2 Performance Bond and Labor and Material Payment Bond (originals) on all Bids over \$10,000.00;
- .3 Certificate of Insurance and copy of Builder's Risk Policy (original), as identified in the specifications;
- .4 Schedule of Values; and
- .5 Federal Immigration Law Compliance: E-Verify enrollment documentation.

§ 6.3.6 The Bid Check or Bond of the three (3) lowest Bidders will not be returned until after the Construction Contract is executed.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 Bond Requirements

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.

§ 7.1.4 A Surety authorized to do business in the State of Alabama shall issue Performance Bond and Labor and Material Payment Bond, as required by the Contract Documents. If the project cost is \$50,000.00 or more, the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc.

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than ten (10) calendar days from receiving the Construction Contract forms for signature.

§ 7.2.2 The bonds shall be written on City's Performance Bond and Labor and Material Payment Bond forms.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is a Stipulated Sum.

§ 8.1.1 AIA Document A101, Standard Form of Agreement Between Owner and Contractor where the Basis of Payment is a stipulated sum will be edited electronically and include the standard signatures as required by the City of Mobile.

ARTICLE 9 NONDISCRIMINATION

§ 9.1.1 Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, *inter alia*, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities. Contractor shall provide a completed copy of the City of Mobile Subcontracting and Major Supplier Plan with the Bid Form, for bids of \$250,000.00 or greater.

ARTICLE 10 USE OF DOMESTIC PRODUCTS

§ 10.1.1 Section 39-3-1 Code of Alabama provides that the Contractor agrees, in the execution of this contract, to use material supplies and products manufactured, mined, processed or otherwise produced in the United States or its territories, if available at reasonable prices, and that breach of this agreement by the Contractor shall result in the assessment of liquidated damages in an amount not less than \$500 nor more than 20 percent of the gross amount of the contract price.

§ 10.1.2 Section 39-3-4, Code of Alabama provides that the Contractor for a municipal construction project, financed by the State of Alabama or any political subdivision thereof, is required to use steel produced within the United States. If the Contractor violates the requirement to use domestic steel, this contract will automatically be revoked and the contractor shall not be entitled to any set-off or recoupment for labor or materials used up to the time of revocation.

ARTICLE 11 PREFERENCE TO RESIDENT CONTRACTORS

§ 11.1.1 Except for contracts funded in whole or in part with funds received from a federal agency, preference shall be given to Alabama resident contractors, and a nonresident bidder domiciled in a state having laws granting preference to local contractors shall be awarded the contracts only on the same basis as a the nonresident bidder's state awards contracts to Alabama contractors bidding under similar circumstances. In the letting of public contracts in which any state, county or municipal funds are utilized, resident contractors in Alabama, be they corporations, individuals or partnerships, are to be granted preference over nonresidents in awarding of contracts in the same manner and to the same extent as provided by the laws of the state of domicile of the nonresident.

§ 11.1.2 A successful nonresident bidder shall include in his post bid submittals a written opinion of an attorney at law licensed to practice law in such nonresident bidders' state of domicile, as to the preferences, if any or none, granted by the law of that state to its own business entities whose principal places of business are in that state in the letting of any or all public contracts.

ARTICLE 12 PRE-BID REQUIREMENTS

§ 12.1 STATE OF ALABAMA CONTRACTORS LICENSE

§ 12.1.1 If the Project total bid amount is \$50,000 or more, a license issued by the State of Alabama Licensing Board for General Contractors is required prior to submitting a bid and the licensed classification and bid limits must cover the type

of work in this project. See Invitation to Bid, Section 6 "Bidder Qualifications".

§ 12.2 A NONRESIDENT BIDDER

§ 12.2.1 Every bidder shall be registered with the Department of Revenue and with the Alabama Secretary of the State prior to bidding. The Secretary of State's "Business Entity ID" registration number shall be included on the bid form.

ARTICLE 13 POST-BID REQUIREMENTS

§ 13.1 CITY CONTRACTOR'S LICENSE

13.1.1 A City of Mobile Contractors License is required and must be current before the Contractor signs the Contract. Contractor must qualify and post \$10,000.00 Surety Bond with the Land Use/Code Administration Department before a Contractors License will be issued by the Revenue Department. Information on the City Contractors License may be obtained by writing or calling:

Land Use/Code Administration
P. O. Box 1827
Mobile, Alabama 36633-1827
Phone: 251.208.7421

Revenue Department
P. O. Box 1827
Mobile, Alabama 36633-1827
251.208.7461

13.2 E-VERIFY DOCUMENTATION

§ 13.2.1 The Contractor agrees that it shall comply with all of the requirements of the State of Alabama Immigration Law (Act. No. 2011-535 as amended by Act. No. 2012-491, Alabama Code (1975) Section 31-13-1, et. Seq., See Section 31-13-9), and the provisions of said Law, including all penalties for violation thereof, are incorporated therein.

13.3 PUBLIC CONTRACTS WITH ENTITIES ENGAGING IN CERTAIN BOYCOTT ACTIVITIES

§ 13.3 The Contractor represents and agrees that it is not currently engaged in, nor will engage in, any boycott of a person or entity based in or doing business with a jurisdiction with which the State of Alabama can enjoy open trade.

(Table deleted)(Paragraphs deleted)(Paragraphs deleted)

SECTION 00300
SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

**THE ATTENTION OF ALL BIDDERS IS CALLED TO THE FOLLOWING
INSTRUCTIONS AND CONDITIONS:**

I. BIDDING DOCUMENTS:

- A. Bidders may obtain complete sets of Bid Documents and Specifications (Project Manual) from the City of Mobile website as listed in the Invitation to Bid.
- B. Bidders shall use the complete set of documents in preparing their bid. The City of Mobile assumes no responsibility for errors or misinterpretations resulting from use of an incomplete set of documents.

Bidders shall use the complete set of documents in preparing their bid. Neither the City of Mobile nor the Engineer (Architect) assume responsibility for errors or misinterpretations resulting from use of an incomplete set of documents.

2. INTERPRETATION OF BID DOCUMENTS:

- A. Bidders shall carefully study and compare the Bidding Documents and compare various components of the Bidding Documents with each other, shall examine the site and local conditions and shall at once report to the Project Manager/Architect any errors, inconsistencies or ambiguities discovered.
- B. Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Architect by 3:00 PM at least five (5) calendar days prior to the date for receipt of Bids. E-mail requests are preferred and should be addressed to joe@espaliерdesign.com.
- C. Interpretations, corrections and changes to the Bidding Documents will be made by a formal, written Addendum. Interpretations, corrections and changes to the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely on them.
- D. Any discrepancy not resolved prior to Bidding shall be bid by the Contractor to provide for the most costly and/or restrictive interpretation of the documents.

3. BIDDING PROCEDURES:

- A. No Bid will be considered unless made out and submitted on a copy of the Bid Form as set forth by the Bid Documents.
- B. All blanks on the Bid Form shall be legibly executed in a non-erasable medium.
- C. Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.

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- D. Interlineations, alterations and erasures must be initialed by the signer of the Bid.
- E. All requested Alternates, Unit Prices and Allowances shall be bid as indicated on the Bid Form and the Bid Documents.
- F. Addenda shall be considered as a part of the Bid Documents and those issued prior to the opening of Bids shall be acknowledged on the Bid Form and any adjustment in cost shall be included in the Contract Sum.

4. BID SECURITY:

- A. A Cashier's Check drawn on an Alabama bank or Bid Bond payable to Owner, City of Mobile, in the amount of 5% of the Base Bid, but in no event more than \$10,000.00, must accompany bid. By submitting a Bid Security, the Bidder pledges to enter into a Contract with the City of Mobile on the terms stated in the Bid, and will, if required, furnish bonds covering faithful performance of the Contract and required insurance certificate. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds or insurance or any other required document, the amount of the Bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.
- B. Bid Bond shall be valid for a minimum of sixty (60) days from the date of the Bid. The Owner reserves the right to retain the security of all Bidders until the successful Bidder enters into the Contract or until (60) days after Bid opening, whichever is sooner.
- C. Bonds must be issued by a Surety licensed to do business in the State of Alabama. If the project cost is more than \$50,000.00 the Surety must have a minimum rating of A/Class VI as reported by the latest issue of Best's Key Rating Guide Property-Casualty published by Alfred M. Best Company, Inc.
- D. Power of Attorney is required for all Bonds.
- E. The Surety company shall be required to execute AIA Document G-707,

"Consent of Surety to Final Payment" prior to Final Payment of retainage being made to the Contractor.

5. EXAMINATION OF DOCUMENTS AND SITE WORK:

- A. Before submitting a Bid, Bidders should carefully examine the Bid Documents, visit the site of the Work, including attendance at the Pre-Bid conference, fully inform themselves as to existing conditions and limitations, and include in the Bid a sum to cover the cost of all items included in the Contract and necessary to perform the Work. The submission of a Bid will be considered as conclusive evidence that the Bidder has made such examination.

6. SUBMISSION OF BIDS:

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- A. Bid, with Bid Security, Sales Tax Form C-3A, City of Mobile Subcontracting & Major Supplier Plan and other supporting data specified, shall be contained in a sealed, opaque envelope, approximately 9x12 inches or larger and be marked on the outside with the words "SEALED BID FOR FIGURES PARK – COMBO FIELD IMPROVEMENTS - PROJECT NUMBER: PR-066-22" and/or "SEALED BID FOR TRINITY GARDENS PARK – COMBO FIELD IMPROVEMENTS - PROJECT NUMBER: PR-040-22" , the Bid Date, and Contractor's name, address, and City of Mobile Business License number. And, if bidding in an amount \$50,000 or greater, the State of Alabama General Contractor's License number and classification of the Bidder issued by the State of Alabama Licensing Board for General Contractors shall be written on the envelope.
- B. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date specified in the Invitation to Bid, or as modified by Addendum, will not be considered. Late Bids will be returned to the Bidder unopened.
- C. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
- D. Oral, telephonic, facsimile, email or other electronically transmitted bids will not be considered.

7. MODIFICATION OR WITHDRAWAL OF BIDS:

- A. A Bid may not be modified, withdrawn, or canceled by the Bidder for a period of one sixty (60) days following the time and date designated for receipt of bids, and each Bidder so agrees in submitting a Bid.

8. CONSIDERATION AND AWARD OF BIDS:

- A. At the discretion of the City, the properly identified Bids received on time will be publicly opened and will be read aloud.
- B. The City shall have the right to reject any and all Bids. A Bid not accompanied by a required Bid security or a Bid which is in any way incomplete or irregular is subject to rejection.
- C. It is the intent of the City to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The City shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the City's judgment, is in the City's best interest.
- D. The award shall be based on the lowest Total Bid for the Base Bid and any allowances, plus any alternates that may be accepted, as listed on the Bid Form.

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9. PROOF OF COMPETENCY OF BIDDER:

- A. Bidders shall furnish evidence satisfactory to the City of Mobile that they have sufficient means and experience in the types of work called for to assure the completion of the Contract in a satisfactory manner.

10. SIGNING OF CONTRACT:

- A. The Standard Agreement between the City of Mobile and the Contractor, included herein, shall serve as the Agreement between the City and the Contractor.
- B. The Bidder to whom the Contract is awarded shall, within ten (10) calendar days of receiving the Contract Forms, properly execute and deliver to the Owner, the following items with the signed Agreement:
 - (1). Performance Bond and Labor and Material Payment Bond (originals);
 - (2). Certificate of Insurance (original) with endorsements to City of Mobile;
 - (3). Evidence of enrollment in the E-Verify program.
 - (4). Other documentation as required by the Contract Documents.
- C. Failure or refusal to sign the Agreement or to provide Certificates of Insurance in a form satisfactory to the City of Mobile, E-Verify verification, or other required documentation, shall subject the Bidder to immediate forfeiture of Bid Security.
- D. On all documents: City of Mobile Business License, the Alabama Secretary of State Business Identity, the Alabama Secretary of State Certificate of Authority (out of state contractors), E-verify documentation, and ACORD Insurance Form, the Contractors name shall be EXACTLY the same.

11. NONDISCRIMINATION:

- A. Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, inter alia, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin, or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assume that fifteen percent of the work performed under contractor be awarded to socially and economically disadvantaged individuals and business entities.

12. AMERICANS WITH DISABILITIES ACT (ADA):

- A. Bidders shall comply with the provisions of the Americans with Disabilities Act (ADA) of 1990 which prohibits discrimination against individuals with disabilities.

13. USE OF DOMESTIC PRODUCTS:

- A. Section 39-3-1, Alabama Code, 1975, provides that the Contractor agree, in the execution of this Contract, to use materials, supplies and products

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manufactured, mined, processed or otherwise produced in the United States or its territories, if available at reasonable prices, and that breach of this Agreement by the Contractor shall result in the assessment of liquidated damages in an amount not less than \$500.00 nor more than twenty (20) percent of gross amount of the Contract Price.

14. NON-RESIDENT (OUT OF STATE) CONTRACTORS:

- A. Preference to Resident Contractors: Section 39-3-5, Code of Alabama, 1975, provides that a non-resident (out of State) bidder domiciled in a state which grants a preference to local Contractors is to be awarded a public contract on the same basis as the non-resident bidder's state awards contracts to Alabama bidders. Alabama bidders are given a preference to the same extent that a non-resident bidder receives a preference in his home state. A non-resident bidder must include with any written bid documents a written opinion of an attorney licensed to practice in the non-resident bidder's state declaring what preferences, if any, exists in the non-resident's state.
- B. Certificate of Authority: All non-resident (out of State) corporations must register with the Secretary of State and obtain a Certificate of Authority before doing business in the State of Alabama. Out of state Bidders should register and secure the required Certificate before submitting a Bid. The account number shall be included on the Bid Form.

15. ALABAMA IMMIGRATION ACT:

- A. The State of Alabama Immigration Law (Act No. 2011-535 as amended by Act No. 2012-491), requires that Contractors not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. In addition, Contractors are required to enroll in the federal E-Verify program and submit verification of enrollment to the City of Mobile within ten (10) days of receiving the contract forms (see Section 00600).

16. CITY OF MOBILE BUSINESS LICENSE:

- A. A City of Mobile Business License is required and must be current at time of contract award and throughout contract period.

17. CITY OF MOBILE CONTRACTOR'S BUSINESS LICENSE:

- A. A City of Mobile Contractor's Business License is required and must be current at time of contract award and throughout contract period.
- B. Contractor must qualify and post a \$10,000 surety bond with the Land Use/Code Administration Department before a Contractor's Business License will be issued by the Revenue Department. Information on the City Contractor's License may be obtained by writing or calling:

Land Use/Code Administration

Revenue Department

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P.O. Box 1827
Mobile, Alabama 36633-1827
Phone: 251-208-7421

P.O. Box 1827
Mobile, Alabama 36633-1827
Phone: 251-208-7461

18. CITY OF MOBILE BUILDING PERMIT:

- A. A City of Mobile Building Permit and Land Disturbance permit are required and shall be obtained from the City of Mobile, but at no cost to the Contractor.
- B. Contractor is responsible for ensuring that all inspections are successfully performed in accordance with City of Mobile regulations.

19. CONSTRUCTION SCHEDULE AND ACCESS:

- A. The project shall be completed within one hundred & eighty (180) days from the date indicated by the Notice to Proceed.
- B. The Park will remain in use throughout the Construction period except the immediate work areas and the Contractor is directed to coordinate all areas of work and scheduling of work with the Owner. Within five days of the bid opening, the Apparent Low Bidder Contractor shall meet with the Owner to discuss Owner scheduling and priorities. Apparent Low Bidder shall then provide a proposed schedule within 5 calendar days of the initial meeting for Owner review and approval.
- C. Contractor shall have access to the Park as approved by the Owner, but typically **Seven days per week from 7:00 A.M. to 5:00 P.M.** Contractor is directed to coordinate all areas of work and scheduling with the Owner.
- D. The Contractor may be allowed additional construction days due to inclement conditions ("rain days") only as such are appropriately documented and are in excess of the NOAA/National Weather Service average (previous 5 years) for the given month. A "rain day" is defined as more than a "trace" (0.10") of rain falling within a given 24 hour period. The Contractor shall provide documentation and formally request any "rain days" they feel are legitimately due. Documentation shall be submitted to the Project Manager, in writing, within ten (10) calendar days of the rain event.

20. SITE CONSIDERATIONS:

- A. It is the Contractor's responsibility to carefully remove and store any items not permanently installed within the work areas. It is recommended that the Contractor photograph, videotape or in some manner document any features to be removed and their condition, prior to removal.
- B. Noise and strong smells shall be isolated or kept to a minimum when adjacent portions of the site are occupied.

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- C. Contractor shall be responsible to leave the work area and adjacent site clear of equipment and debris, etc. at the end of each work day. All final cleaning is the responsibility of the Contractor and shall be executed prior to acceptance for reuse of any portion of the site.
 - D. A dumpster and lay down area for Contractor materials and staging may be located at the site and located per the direction of the Owner. The Contractor is responsible for the removal of the dumpster, any storage containers and any security fencing, temporary erosion control (BMPs), etc. as soon as practical after their use by the Contractor or the work is complete.
21. SALES AND USE TAX EXEMPTION:
- A. As per the State of Alabama ACT 2013-205, the Alabama Department of Revenue (ADOR) has been granted the authority to issue a "Certificate of Exemption from Sales and Use Tax for Governmental Entities" on construction projects. Therefore, this project shall qualify for State of Alabama Sales and Use Tax Exemptions under this ACT. It is the responsibility of the Bidder to confirm the potential tax exempt status of their bid with the ADOR and include any such savings in their bid, as well as accounting for same on their bid form attachment Sales Tax Form C-3A.
 - B. The full text of ACT 2013-205 is available on the State of Alabama Building Commission web-site at www.bc.alabama.gov.
22. SUBMISSION OF LIEN WAIVERS & DBE COMPLIANCE, UTILIZATION REPORTS:
- A. At each monthly Application for Payment submitted to the owner, the Contractor shall provide lien waivers, including those from Subcontractors and material suppliers, and a completed "City of Mobile DBE Compliance Utilization Report".
23. NOTICE OF COMPLETION:
- A. For Contracts \$50,000 or greater:
Contractor shall provide proof of publication of Advertisement of Completion for four successive weeks in a local newspaper, as required in the Title 39, Section 39-1-1, Subsection (f), of the Code of Alabama. This Advertisement shall not begin until the Project has been accepted by the City of Mobile.
 - B. Notice of Completion advertisement shall read as follows:

STATE OF ALABAMA
COUNTY OF MOBILE
NOTICE OF COMPLETION
In accordance with Chapter 1, Title 39, Code of Alabama, 1975, NOTICE IS
HEREBY given that ([COMPANY NAME](#)) has completed the contract for Figures

Figures Park & Trinity Gardens Park
Combo Field Improvements
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Park Combo Field Improvements PR-066-22 and/or Trinity Gardens Park Combo Field Improvements PR-040-22, in Mobile, Alabama. All persons having any claims for labor, material or otherwise in connection with this project should immediately notify the Architectural Engineering Department, City of Mobile, P.O. Box 1827, Mobile, Alabama 36633-1827.

- C. Advertisement shall not begin until the Project has been accepted by the City of Mobile as Substantially Complete.

24. CONTRACTOR WARRANTY AND CERTIFICATION:

- A. Upon completion of the contract, the Contractor shall certify under oath that all bills have been paid in full.
- B. Contractor shall provide a one year Labor and Materials Warranty on company letterhead in addition to other warranties required by the Bid Documents.

25. LIQUIDATED DAMAGES

- A. A time charge equal to Two Hundred Fifty Dollars (\$250.00) per calendar day will be made against the Contractor for the entire period that any part of the Work remains uncompleted, or any required closeout documents are not acceptably submitted, for more than thirty (30) calendar days after the time specified for the Substantial Completion for the Work, the amount of which shall be deducted by the owner, and shall be retained by the Owner out of monies otherwise due the Contractor at the final payment, not as a penalty, but as liquidated damages sustained.

END OF SECTION

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SECTION 00400

BID FORM

Copies of the following Bid Forms shall be used. Bids submitted on alternate forms may be rejected. Fill in all blank spaces with an appropriate entry. Bid Form must be signed by an officer of the company and notarized.

TO: City of Mobile, 205 Government St., P.O. Box 1827, Mobile, AL, 36633

REF: PROJECT NO.: PR-066-22
PROJECT NAME: Figures Park Combo Field Improvements
PROJECT LOCATION: 658 Donald St. C Mobile, AL 36617

In compliance with the Bid Documents and having carefully and thoroughly examined said documents for the subject Work prepared by Espalier, LLC and S.E. Civil dated September 10, 2023; and all Addendum (a) Number(s):

_____, dated _____, 2023

(CAUTION: before submitting any bid it is the Bidder's responsibility to check with the Architectural Engineering Department for all Addenda or special instructions that may impact the Bid) thereto, receipt of which is hereby acknowledged, the premises and all conditions affecting the Work prior to making this Proposal, the Undersigned Bidder, hereby

COMPANY NAME: _____

ADDRESS: _____ **PHONE** _____

ALABAMA GENERAL CONTRACTOR LICENSE NO. _____

CITY OF MOBILE BUSINESS LICENSE NO. _____

SECRETARY OF STATE OF ALABAMA BUSINESS IDENTITY NO. _____

SECRETARY OF STATE OF ALABAMA ACCOUNT NO. _____

(Note: Secretary of State Account Number shall be filled in only by non-resident bidders)

(Check one) (A Corporation) (A Partnership) (An Individual Doing Business)

hereby proposes to furnish all labor, materials, tools, equipment, and supplies and to sustain all the expenses incurred in performing the Work on the above captioned Project in accordance with the terms of the Contract Documents, and all applicable laws and regulations for the sum listed below. The initial term of the Contract shall extend for one hundred eighty (180) days from the date of the Notice to Proceed.

Figures Park
Combo Field Improvements
Mobile, AL - PR-066-22

Base Bid: \$ _____

Contingency Allowance: + \$ 15,000.00

Total Base Bid: \$ _____

(Fill in here and in Total Bid below)

TOTAL BASE BID: _____

_____ Dollars, (\$ _____)
(Amount in Words) (Amount in Figures)

(Note: Show amount in both words and figures. In case of discrepancy, the amount in words shall govern). **Bids shall be provided in whole dollar amount with no cents.**

Unit Price #1: Provide and install Silt Fence Type A. Includes installation, removal, and all other necessary construction components for installation.

\$ _____ LF

Unit Price #2: Provide and install 4" concrete flatwork (sidewalks, batting cage) per detail. Include excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation.

\$ _____ SF

Unit Price #3: Provide and install solid sod, Bermuda. Include grading, placement, and all other necessary construction components for installation.

\$ _____ SY

Unit Price #4: Provide and install batting cage as specified. Include all materials and hardware, mounting, netting, excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation

\$ _____ EA

Unit Price #5: Provide and install baseball foul poles as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation

\$ _____ EA

Unit Price #6: Provide and install turf rotor to include associated lateral piping and all other necessary construction components for installation.

\$ _____ EA

Figures Park
Combo Field Improvements
Mobile, AL - PR-066-22

Unit Price #7: Provide and install irrigation control valve, including single strand control wire and all other necessary construction components for installation.

\$ _____ EA

Unit Price #8: Provide and install irrigation mainline and all other necessary construction components for installation.

\$ _____ EA

Unit Price #9: Provide and install scoreboard as specified. Include all materials, hardware, wiring, and all other necessary construction components for installation.

\$ _____ EA

CONTINGENCY ALLOWANCE: \$15,000.00 lump sum Contingency Allowance shall be included in the Total Bid for work related to unforeseen conditions as approved by the Owner.

BID SECURITY: The undersigned Bidder agrees that the attached Bid Security, as a Cashier's Check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation or a Bid Bond, made payable to the City of Mobile, in the amount of 5% of the bid amount, but in no event more than \$10,000, as the proper measure of liquidated damages which the City will sustain by the failure of the undersigned to execute the Contract. Said Bid Security shall become the property of the City of Mobile as liquidated damages as specified in the Contract Documents.

AMERICANS WITH DISABILITIES ACT (ADA): The undersigned Bidder agrees to fully comply with all requirements of the Americans with Disabilities Act of 1990 and the Amendment Act.

NONDISCRIMINATION: Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, *inter alia*, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities.

Figures Park
Combo Field Improvements
Mobile, AL - PR-066-22

SIGNATURE: If the undersigned Bidder is incorporated, the entire legal title of the company followed by "a corporation" should be used. If Bidder is an individual, then that individual's full legal name followed by doing business as (d/b/a) and name of firm, if any, should be used. If Bidder is a partnership, then full name of each partner should be listed followed by "d/b/a" and name of firm, if any.

Ensure that name and exact arrangement thereof is the same on all forms submitted with this Bid. If a word is abbreviated in the official company name, such as "Co.", then use that abbreviation. If not abbreviated in the official name, spell out.

Bidder agrees not to revoke or withdraw this Bid until sixty (60) calendar days following the time and date for receipt of bids. If notified in writing of the acceptance of this Bid within this time period, Bidder agrees to execute a Contract based on this Bid on the proscribed form within ten (10) calendar days of said notification and to furnish Performance Bond and Materials and Payment Bond as specified.

COMPANY NAME: _____
(Printed or Typed)

BY: _____
(Signature of Company Officer)

COMPANY OFFICER: _____
(Printed or Typed)

TITLE _____ **DATE** _____, 2023
(Printed or Typed)

Sworn to and subscribed before me this _____ day of _____ 2023

Notary Public

- Attachments: 1. Bid Security, with Power of Attorney
2. Secretary of State Authorization (Out of state bidders only)
3. Sales Tax Form C-3A
4. Supplier Diversity Subcontracting & Major Supplier Plan

END OF BID FORM

**ACCOUNTING OF SALES TAX
ATTACHMENT TO BID FORM SECTION 00400
SALES TAX FORM C-3A**

To: City of Mobile

Date: _____

Name of Project: FIGURES PARK – COMBO FIELD IMPROVEMENTS
Project Number: PR-066-22

SALES TAX ACCOUNTING

Pursuant to Act 2013-205, Section 1(g) the Contractor accounts for the sales tax NOT included in the bid proposal form as follows:

ESTIMATED SALES TAX AMOUNT

BASE BID: \$ _____

Failure to provide an accounting of sales tax shall render the bid non-responsive. Other than determining responsiveness, sales tax accounting shall not affect the bid pricing nor be considered in the determination of the lowest responsible and responsive bidder.

Legal Name of Bidder _____

Mailing Address _____

***By (Legal Signature)** _____

*Name (type or print) _____ (Seal)

*Title _____

Telephone Number _____



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

Contact Office of Supplier Diversity for questions on completing this form.
Via email: Archonique.kidd@cityofmobile.org
251.208.7967
205 Government Street, 4th Floor

Bidders and Proposers – Please complete and submit these forms as required by your City of Mobile Bid or Proposal Specification.

This document provides information to the City of Mobile about the subcontractors and major suppliers you intend to use to complete this contract. Failure to submit this form, when so required by the bid or proposal specification, will render your bid non-responsible. Not all specifications require this form to be completed, or may require its completion under varying circumstances. Refer to the specification for direction.

The City of Mobile will use this form to:

- Understand your intended use of subcontractors and major suppliers as part of your bid/proposal submission.
- Evaluate your capability to complete the performance of this contract.
- Determine your use of Disadvantaged Business Enterprises (DBEs) as subcontractors and suppliers.
- For certain contracts, assess whether you exercised “good faith efforts” to use DBE subcontractors and suppliers for at least 15% of the value of your bid/proposal amount. (See City of Mobile City Code Sec. 14-2.)

Include this form with your bid/proposal submission. Should your bid be considered the lowest responsible bid, you will have the opportunity to update this form at contract signature. You also will be required to re-verify your information at contract conclusion.

The bid specification may require you to attempt in “good faith” to use DBE subcontractors and suppliers for at least 15% of the value of your bid in the performance of this contract. If you don’t have that level of DBE subcontractor / supplier usage (as documented on **Form 1**), you are required to complete the “good faith effort” documentation on **Form 2**. When so required, failure to adequately address the good faith effort factors on Form 2 will render your bid or proposal as non-responsive. The determination whether the bid or proposal adequately demonstrates and documents a DBE subcontractor/supplier plan, or good faith efforts to complete such a plan, will be at the sole discretion of the City of Mobile. You are encouraged to work with the City of Mobile Supplier Diversity Manager when preparing this form.

About “**DBEs**”: The City of Mobile considers businesses owned by minorities, women, or disabled veterans to be DBEs. Please consult with the City Supplier Diversity Manager for clarification or lists of certified DBEs.

About “**Good Faith**” **Effort**: The City of Mobile expects contractors holding large contracts to recruit and engage DBEs to be a part of their team. If the specification sets, and you cannot meet, the 15% target, you must show us how you attempted to recruit and engage DBEs to meet this target. This helps the City identify DBE market weaknesses for development, and ensures all bidders are equally considering this obligation in preparing a bid. The “good faith effort” factors on **Form 2** are not intended to be a mandatory, exhaustive, or exclusive. They are a tool to help you, and to help the City consistently and fairly consider your effort.



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

Contact Office of Supplier Diversity for questions on completing this form.
Via email: Archonique.kidd@cityofmobile.org
251.208.7967
205 Government Street, 4th Floor

FORM 1: Background and Plan

Section I. Information about your company

Company	
Address	
Telephone	
E-Mail	

RFP/RFQ Solicitation Number	
Project Description	
Is your company a DBE company?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Work force demographics	Male _____ Female _____ Minority _____ Non-minority _____ Vets _____
Total #of Employees	_____

Subcontractor/Major Supplier Plan submitted by:

Printed Name: _____

Signature: _____ Date: _____

Title: _____

The following employee will be designated as the **DBE Liaison** for all communication regarding DBE participation including documentation for DBE participation and maintenance of records of Good Faith Efforts for this contract award:

Name: _____ Title: _____

E-mail: _____ Phone: _____



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE
 Subcontracting and Major Supplier Plan

Form 2: Good Faith Effort Documentation

Name of Bidder: _____

Contact Person: _____

Phone _____ Email _____

Please complete this form if you are unable to identify DBE subcontractors or suppliers to reach 15% of the value of your bid.

YES <input type="checkbox"/>	NO <input type="checkbox"/>	Did you do these suggested areas for DBE recruitment and engagement
		PRE-BID MEETING(S): The bidder attended all pre-bid meetings scheduled by the City to inform DBEs of contracting and subcontracting opportunities.
		CMDBE/ALDOT DBE LIST(S): The bidder utilized the Office of Supplier Diversity's list or lists of certified ALDOT DBE 's
		SMALL CONTRACT(S): The bidder selected specific portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goals (including breaking down contracts into smaller units to facilitate DBE participation). Consider support services, including insurance, accounting, temporary labor, and transportation, landscaping, and janitorial as potential areas for DBE use.
		FOLLOW-UP: The bidder followed-up initial indications of interest by DBEs by contacting those DBEs to determine with certainty if they remained interested in bidding.
		ADVERTISEMENT: The bidder advertised in general circulation and/or trade association publications concerning subcontracting opportunities, and allowed DBEs reasonable time to respond.
		INTERNET ADVERTISING: The bidder advertised DBE and/or subcontracting opportunities on the <i>City of Mobile</i> Facebook page or other internet portals that are accessible to DBEs and/or potential subcontractors.
		GOOD FAITH NEGOTIATIONS: The bidder negotiated in good faith with interested DBEs and did not reject DBEs as unqualified without sound business reasons based on a thorough investigation of their capabilities.



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

		INFORMATION: The bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the subcontract.
		WRITTEN NOTICE(S): The bidder/proposer took the necessary steps to provide written notice in a manner reasonably calculated to inform DBEs of subcontracting opportunities and allowed sufficient time for them to participate effectively.
		COMMUNITY RESOURCES: The bidder/proposer used the services of available community organizations, small and/or disadvantaged business assistance offices and other organizations that provided assistance in the recruitment and placement of DBE firms.
		CONTRACT RECORDS: The bidder/proposer has maintained the following records for each DBE that has bid on the subcontracting opportunity: 1. Name, address, and telephone number; 2. A description of information provided by the bidder/proposer or subcontractor; and 3. A statement of whether an agreement was reached, and if not, why not, including any reasons for concluding that the DBE was unqualified to perform the job.

Please indicate if any of the following applied:

_____ There are not ways to break out 15% of the value of this contract for subcontractors / suppliers.

_____ Could not find sufficient DBEs to provide subcontracting or supplier services.

_____ DBEs were available but did not have sufficient qualifications or experience to meet the needs of this contract.

Please indicate additional efforts you have taken to recruit and engage DBEs. _____

Suggestions or comments to improve this program. _____

Trinity Park
Combo Field Improvements
Mobile, AL - PR-040-22

SECTION 00400

BID FORM

Copies of the following Bid Forms shall be used. Bids submitted on alternate forms may be rejected. Fill in all blank spaces with an appropriate entry. Bid Form must be signed by an officer of the company and notarized.

TO: City of Mobile, 205 Government St., P.O. Box 1827, Mobile, AL, 36633

REF: PROJECT NO.: PR-040-22
PROJECT NAME: Trinity Park Combo Field Improvements
PROJECT LOCATION: 3100 Bank Ave., Mobile, AL 36617

In compliance with the Bid Documents and having carefully and thoroughly examined said documents for the subject Work prepared by Espalier, LLC and S.E. Civil dated September 10, 2023; and all Addendum (a) Number(s):

_____, dated _____, 2023

(CAUTION: before submitting any bid it is the Bidder's responsibility to check with the Architectural Engineering Department for all Addenda or special instructions that may impact the Bid) thereto, receipt of which is hereby acknowledged, the premises and all conditions affecting the Work prior to making this Proposal, the Undersigned Bidder, hereby

COMPANY NAME: _____

ADDRESS: _____ **PHONE** _____

ALABAMA GENERAL CONTRACTOR LICENSE NO. _____

CITY OF MOBILE BUSINESS LICENSE NO. _____

SECRETARY OF STATE OF ALABAMA BUSINESS IDENTITY NO. _____

SECRETARY OF STATE OF ALABAMA ACCOUNT NO. _____

(Note: Secretary of State Account Number shall be filled in only by non-resident bidders)

(Check one) (A Corporation) (A Partnership) (An Individual Doing Business)

hereby proposes to furnish all labor, materials, tools, equipment, and supplies and to sustain all the expenses incurred in performing the Work on the above captioned Project in accordance with the terms of the Contract Documents, and all applicable laws and regulations for the sum listed below. The initial term of the Contract shall extend for one hundred eighty (180) days from the date of the Notice to Proceed.

Trinity Park
Combo Field Improvements
Mobile, AL - PR-040-22

Base Bid: \$ _____

Contingency Allowance: + \$ 20,000.00

Total Base Bid: \$ _____

(Fill in here and in Total Bid below)

TOTAL BASE BID: _____

_____ Dollars, (\$ _____)
(Amount in Words) (Amount in Figures)

(Note: Show amount in both words and figures. In case of discrepancy, the amount in words shall govern). **Bids shall be provided in whole dollar amount with no cents.**

Unit Price #1: Provide and Install on-site placement and compaction of soil (Cut/Fill) – CY, includes excavating or filling. Cut material will be placed elsewhere on-site. Fill material will be from material onsite, and all other necessary construction components for installation.

\$ _____ CY

Unit Price #2: Unsuitable Soil Material – Cubic Yards In Place, includes excavation, haul off and disposal of unsuitable material.

\$ _____ CYIP

Unit Price #3: Structural Fill – Cubic Yards In Place, Provide and Install Imported Structural Fill, spread, compaction, and all other necessary construction components for installation.

\$ _____ CYIP

Unit Price #4: Provide and install Silt Fence Type A. Includes installation, removal, and all other necessary construction components for installation.

\$ _____ LF

Unit Price #5: Provide and install inlet protection. Includes installation, removal, and all other necessary construction components for installation.

\$ _____ EA

Unit Price #6: Provide and install wattles. Includes installation, removal, and all other necessary construction components for installation.

\$ _____ EA

Trinity Park
Combo Field Improvements
Mobile, AL - PR-040-22

Unit Price #7: Provide and install 12" HDPE drain pipe. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.

\$ _____ LF

Unit Price #8: Provide and install 0'-4' Drop Inlet. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.

\$ _____ EA

Unit Price #9: Provide and install 6' Vinyl Chain Link Fence as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.

\$ _____ LF

Unit Price #10: Provide and install solid sod, Bermuda. Include grading, placement, and all other necessary construction components for installation.

\$ _____ SY

Unit Price #11: Provide and install batting cage as specified. Include all materials and hardware, mounting, netting, excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation.

\$ _____ EA

Unit Price #12: Provide and install baseball foul poles as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation.

\$ _____ EA

Unit Price #13: Provide and install yellow Saf-Top Fence Guard and all other necessary construction components for installation.

\$ _____ LF

Unit Price #14: Provide and install football goal posts as specified. Include all assembly, placement, & other necessary construction components for installation.

\$ _____ EA

Trinity Park
Combo Field Improvements
Mobile, AL - PR-040-22

CONTINGENCY ALLOWANCE: \$50,000.00 lump sum Contingency Allowance shall be included in the Total Bid for work related to unforeseen conditions as approved by the Owner.

BID SECURITY: The undersigned Bidder agrees that the attached Bid Security, as a Cashier's Check drawn on a bank registered to do business in the State of Alabama and which is a member of the Federal Deposit Insurance Corporation or a Bid Bond, made payable to the City of Mobile, in the amount of 5% of the bid amount, but in no event more than \$10,000, as the proper measure of liquidated damages which the City will sustain by the failure of the undersigned to execute the Contract. Said Bid Security shall become the property of the City of Mobile as liquidated damages as specified in the Contract Documents.

AMERICANS WITH DISABILITIES ACT (ADA): The undersigned Bidder agrees to fully comply with all requirements of the Americans with Disabilities Act of 1990 and the Amendment Act.

NONDISCRIMINATION: Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, *inter alia*, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities.

SIGNATURE: If the undersigned Bidder is incorporated, the entire legal title of the company followed by "a corporation" should be used. If Bidder is an individual, then that individual's full legal name followed by doing business as (d/b/a) and name of firm, if any, should be used. If Bidder is a partnership, then full name of each partner should be listed followed by "d/b/a" and name of firm, if any.

Ensure that name and exact arrangement thereof is the same on all forms submitted with this Bid. If a word is abbreviated in the official company name, such as "Co.", then use that abbreviation. If not abbreviated in the official name, spell out.

Bidder agrees not to revoke or withdraw this Bid until sixty (60) calendar days following the time and date for receipt of bids. If notified in writing of the acceptance of this Bid within this time period, Bidder agrees to execute a Contract based on this Bid on the proscribed form within ten (10) calendar days of said notification and to furnish Performance Bond and Materials and Payment Bond as specified.

Trinity Park
Combo Field Improvements
Mobile, AL - PR-040-22

COMPANY NAME: _____
(Printed or Typed)

BY: _____
(Signature of Company Officer)

COMPANY OFFICER: _____
(Printed or Typed)

TITLE _____ **DATE** _____, 2023
(Printed or Typed)

Sworn to and subscribed before me this _____ day of _____ 2023

Notary Public

- Attachments:
1. Bid Security, with Power of Attorney
 2. Secretary of State Authorization (Out of state bidders only)
 3. Sales Tax Form C-3A
 4. Supplier Diversity Subcontracting & Major Supplier Plan

END OF BID FORM

**ACCOUNTING OF SALES TAX
ATTACHMENT TO BID FORM SECTION 00400
SALES TAX FORM C-3A**

To: City of Mobile

Date: _____

Name of Project: Trinity Park Combo Field Improvements
Project Number: PR-040-22

SALES TAX ACCOUNTING

Pursuant to Act 2013-205, Section 1(g) the Contractor accounts for the sales tax NOT included in the bid proposal form as follows:

ESTIMATED SALES TAX AMOUNT

BASE BID: \$ _____

Failure to provide an accounting of sales tax shall render the bid non-responsive. Other than determining responsiveness, sales tax accounting shall not affect the bid pricing nor be considered in the determination of the lowest responsible and responsive bidder.

Legal Name of Bidder _____

Mailing Address _____

***By (Legal Signature)** _____

*Name (type or print) _____ (Seal)

*Title _____

Telephone Number _____



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

Contact Office of Supplier Diversity for questions on completing this form.
Via email: Archonique.kidd@cityofmobile.org
251.208.7967
205 Government Street, 4th Floor

Bidders and Proposers – Please complete and submit these forms as required by your City of Mobile Bid or Proposal Specification.

This document provides information to the City of Mobile about the subcontractors and major suppliers you intend to use to complete this contract. Failure to submit this form, when so required by the bid or proposal specification, will render your bid non-responsible. Not all specifications require this form to be completed, or may require its completion under varying circumstances. Refer to the specification for direction.

The City of Mobile will use this form to:

- Understand your intended use of subcontractors and major suppliers as part of your bid/proposal submission.
- Evaluate your capability to complete the performance of this contract.
- Determine your use of Disadvantaged Business Enterprises (DBEs) as subcontractors and suppliers.
- For certain contracts, assess whether you exercised “good faith efforts” to use DBE subcontractors and suppliers for at least 15% of the value of your bid/proposal amount. (See City of Mobile City Code Sec. 14-2.)

Include this form with your bid/proposal submission. Should your bid be considered the lowest responsible bid, you will have the opportunity to update this form at contract signature. You also will be required to re-verify your information at contract conclusion.

The bid specification may require you to attempt in “good faith” to use DBE subcontractors and suppliers for at least 15% of the value of your bid in the performance of this contract. If you don’t have that level of DBE subcontractor / supplier usage (as documented on **Form 1**), you are required to complete the “good faith effort” documentation on **Form 2**. When so required, failure to adequately address the good faith effort factors on Form 2 will render your bid or proposal as non-responsive. The determination whether the bid or proposal adequately demonstrates and documents a DBE subcontractor/supplier plan, or good faith efforts to complete such a plan, will be at the sole discretion of the City of Mobile. You are encouraged to work with the City of Mobile Supplier Diversity Manager when preparing this form.

About “**DBEs**”: The City of Mobile considers businesses owned by minorities, women, or disabled veterans to be DBEs. Please consult with the City Supplier Diversity Manager for clarification or lists of certified DBEs.

About “**Good Faith**” **Effort**: The City of Mobile expects contractors holding large contracts to recruit and engage DBEs to be a part of their team. If the specification sets, and you cannot meet, the 15% target, you must show us how you attempted to recruit and engage DBEs to meet this target. This helps the City identify DBE market weaknesses for development, and ensures all bidders are equally considering this obligation in preparing a bid. The “good faith effort” factors on **Form 2** are not intended to be a mandatory, exhaustive, or exclusive. They are a tool to help you, and to help the City consistently and fairly consider your effort.



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

Contact Office of Supplier Diversity for questions on completing this form.
Via email: Archonique.kidd@cityofmobile.org
251.208.7967
205 Government Street, 4th Floor

FORM 1: Background and Plan

Section I. Information about your company

Company	
Address	
Telephone	
E-Mail	

RFP/RFQ Solicitation Number	
Project Description	
Is your company a DBE company?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Work force demographics	Male _____ Female _____ Minority _____ Non-minority _____ Vets _____
Total #of Employees	_____

Subcontractor/Major Supplier Plan submitted by:

Printed Name: _____

Signature: _____ Date: _____

Title: _____

The following employee will be designated as the **DBE Liaison** for all communication regarding DBE participation including documentation for DBE participation and maintenance of records of Good Faith Efforts for this contract award:

Name: _____ Title: _____

E-mail: _____ Phone: _____



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

Contact Office of Supplier Diversity for questions on completing this form.
Via email: Archonique.kidd@cityofmobile.org
251.208.7967
205 Government Street, 4th Floor

FORM 1: Background and Plan
Section II. Plan for Subcontractors and Major Vendors

This form asks for your intentions to utilize subcontractors and suppliers as a potential contractor for the city of Mobile. For purposes of this form, disadvantaged individuals or enterprises include persons or small-business-enterprise owners who are women, members of a racial minority, or disabled military veterans.

RFP/RFQ/Bid # _____ Your Bid/Proposal Amount \$ _____ Date: ____/____/____

Description _____

Name of Bidder/Proposer: _____

I intend to use the following subcontractors: (Attach additional pages if necessary)

Subcontractor or Major Supplier	Phone	Scope of Work to be performed	\$\$ Value to be Performed	% Of Your Bid Amount	DBE?	Official Verification Only



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE
Subcontracting and Major Supplier Plan

Form 2: Good Faith Effort Documentation

Name of Bidder: _____

Contact Person: _____

Phone _____ Email _____

Please complete this form if you are unable to identify DBE subcontractors or suppliers to reach 15% of the value of your bid.

YES <input type="checkbox"/>	NO <input type="checkbox"/>	
		Did you do these suggested areas for DBE recruitment and engagement
		PRE-BID MEETING(S): The bidder attended all pre-bid meetings scheduled by the City to inform DBEs of contracting and subcontracting opportunities.
		CMDBE/ALDOT DBE LIST(S): The bidder utilized the Office of Supplier Diversity's list or lists of certified ALDOT DBE 's
		SMALL CONTRACT(S): The bidder selected specific portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goals (including breaking down contracts into smaller units to facilitate DBE participation). Consider support services, including insurance, accounting, temporary labor, and transportation, landscaping, and janitorial as potential areas for DBE use.
		FOLLOW-UP: The bidder followed-up initial indications of interest by DBEs by contacting those DBEs to determine with certainty if they remained interested in bidding.
		ADVERTISEMENT: The bidder advertised in general circulation and/or trade association publications concerning subcontracting opportunities, and allowed DBEs reasonable time to respond.
		INTERNET ADVERTISING: The bidder advertised DBE and/or subcontracting opportunities on the <i>City of Mobile</i> Facebook page or other internet portals that are accessible to DBEs and/or potential subcontractors.
		GOOD FAITH NEGOTIATIONS: The bidder negotiated in good faith with interested DBEs and did not reject DBEs as unqualified without sound business reasons based on a thorough investigation of their capabilities.



OFFICE OF SUPPLIER DIVERSITY
CITY OF MOBILE

Subcontracting and Major Supplier Plan

		<p>INFORMATION: The bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the subcontract.</p>
		<p>WRITTEN NOTICE(S): The bidder/proposer took the necessary steps to provide written notice in a manner reasonably calculated to inform DBEs of subcontracting opportunities and allowed sufficient time for them to participate effectively.</p>
		<p>COMMUNITY RESOURCES: The bidder/proposer used the services of available community organizations, small and/or disadvantaged business assistance offices and other organizations that provided assistance in the recruitment and placement of DBE firms.</p>
		<p>CONTRACT RECORDS: The bidder/proposer has maintained the following records for each DBE that has bid on the subcontracting opportunity:</p> <ol style="list-style-type: none"> 1. Name, address, and telephone number; 2. A description of information provided by the bidder/proposer or subcontractor; and 3. A statement of whether an agreement was reached, and if not, why not, including any reasons for concluding that the DBE was unqualified to perform the job.

Please indicate if any of the following applied:

_____ There are not ways to break out 15% of the value of this contract for subcontractors / suppliers.

_____ Could not find sufficient DBEs to provide subcontracting or supplier services.

_____ DBEs were available but did not have sufficient qualifications or experience to meet the needs of this contract.

Please indicate additional efforts you have taken to recruit and engage DBEs. _____

Suggestions or comments to improve this program. _____

Figures Park & Trinity Gardens Park
Combo Field Improvements
Mobile, AL - PR-066-22 & PR-040-22

SECTION 00500

STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

PART 1 GENERAL

- A. This section includes the STANDARD FORM OF AGREEMENT BETWEEN OWNER and CONTRACTOR, AIA Document A101, wherein the basis of payment is a Stipulated Sum; the document has been electronically modified to meet the Owner's requirements and shall be used for the Project.



AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the day of in the year
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

City of Mobile
P.O. Box 1827
Mobile, Alabama 36633-1827

and the Contractor:
(Name, legal status, address and other information)

Contractor Company Name
Address
City of Mobile Business License Number:
Secretary of State Registration Number:

for the following Project:
(Name, location and detailed description)

Figures Park – Combo Field Improvements
658 Donald Street C
Mobile, Alabama 36617
PR-066-22
and
Trinity Gardens Park – Combo Field Improvements
3100 Bank Avenue
Mobile, Alabama 36617
PR-040-22

The work of this contract consists of the demolition of an existing baseball field infield area and combo field areas, regraded and installing new sod, irrigation, foul poles, bases and a new batting cage.

The Architect:
(Name, legal status, address and other information)

Architectural Engineering Department
P.O. Box 1827
Mobile, Alabama 36633-182702

Espalier, LLC
P.O. Box 1247
Fairhope, Alabama 36533

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101@–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201@–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

Init.

User Notes:

(1634547000)

The Owner and Contractor agree as follows.

TABLE OF ARTICLES

1	THE CONTRACT DOCUMENTS
2	THE WORK OF THIS CONTRACT
3	DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
4	CONTRACT SUM
5	PAYMENTS
6	DISPUTE RESOLUTION
7	TERMINATION OR SUSPENSION
8	MISCELLANEOUS PROVISIONS
9	ENUMERATION OF CONTRACT DOCUMENTS, INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others. (See attachment Exhibit A).

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

A date set forth in a notice to proceed issued by the Owner.

(Paragraphs deleted)

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

Not later than One Hundred and Eighty (180) calendar days from the date of the Notice to Proceed for commencement of the Work.

§ 3.3.2 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

(Table deleted)

(Paragraph deleted)

Init.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor’s performance of the Contract. The Contract Sum shall be Alpha (and 00/100 Dollars) (\$ Numerical), subject to additions and deductions as provided in the Contract Documents.

Figures Park

Base Bid:

Contingency Allowance: \$15,000.00

Total Bid:

Trinity Park

Base Bid:

Contingency Allowance: \$20,000.00

Total Bid:

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price
n/a	

(Table deleted)

(Paragraphs deleted)

§ 4.3 Allowances, if any, included in the Contract Sum:

(Identify each allowance.)

Contingency Allowance (Figures Park): Fifteen Thousand and 00/100 Dollars (\$15,000.00)

Contingency Allowance (Trinity Park): Twenty Thousand and 00/100 Dollars (\$20,000.00)

- A. Contingency Allowance shall cover cost of material, labor, overhead, profit and other expenses for complete installation of items of additional work as required for a complete, functional project.
- B. Contingency Allowance shall be used for unforeseen conditions not covered in the construction documents.
- C. All extra work under this section must be authorized by the Owner, in writing, prior to materials or undertaking work.
- D. Upon completion of the Work, the unused portion of the Allowance shall be credited back to the Owner in *(Table deleted)* the form of a Change Order.
- E. Allowances are subject to the same provision of AIA 201 Article 7.3.7.

§ 4.4 Unit prices, if any:

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Trinity Gardens Park

Item	Units and Limitations	Price per Unit (\$0.00)
1) Provide and Install on-site placement and compaction of soil (CuVFill), includes excavating or filling. Cut material will be placed elsewhere onsite or hauled off as required. Fill material will be from material onsite, and all other necessary construction components for installation.	Cubic Yards – CY	

Init.

User Notes:

(1634547000)

2) Unsuitable Soil Material - Cubic Yards In Place, includes excavation, haul off and disposal of unsuitable material.	Cubic Yards In Place – CYIP
3) Structural Fill - Cubic Yards In Place, Provide and Install Imported Structural Fill, spread, compaction, and all other necessary construction components for installation.	Cubic Yards In Place – CYIP
4) Provide and install Silt Fence Type A. Includes installation, removal, and all other necessary construction components for installation.	Linear Feet – LF
5) Provide and install inlet protection. Includes installation, removal, and all other necessary construction components for installation.	Each – EA
6) Provide and install waterUes. Includes installation, removal, and all other necessary construction components for installation.	Linear Feet – LF
7) Provide and install 12" HDPE drain pipe. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.	Linear Feet – LF
8) Provide and Install 0'-4' Drop Inlet. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.	Each – EA
9) Provide and install 6' Vinyl Chain Link Fence as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.	Linear Feet – LF
10) Provide and install solid sod, Bermuda. Include grading, placement, and all other necessary construction components for installation.	Square Yard – SY
11) Provide and install batting cage as specified. Include all materials and hardware, mounting, netting, excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation	Each – EA

Init.

/

12) Provide and install baseball foul poles as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation

Each – EA

13) Provide and install yellow Saf-Top fence guard and all other necessary construction components for installation.

Figures Park

Item	Units and Limitations	Price per Unit (\$0.00)
Provide and install Silt Fence Type A. Includes installation, removal, and all other necessary construction components for installation.	Linear Feet – LF	
2) Provide and install 4" concrete flatwork curb (sidewalks, etc) per detail. Include excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation	Square Feet – SF	
3) Provide and install solid sod, Bermuda. Include grading, placement, and all other necessary construction components for installation.	Square Yard – SY	
4) Provide and install batting cage as specified. Include all materials and hardware, mounting, netting, excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation	Each – EA	
5) Provide and install baseball foul poles as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation	Each – EA	
6) Provide and install turf rotor as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation	Each – EA	
7) Provide and install irrigation control valve as	Each – EA	

Init.

/

specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation

8) Provide and install irrigation mainline as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation

Linear Feet - LF

§ 4.5 Liquidated damages:

(Insert terms and conditions for liquidated damages, if any.)

A time charge equal to Two Hundred Fifty and 00/100 Dollars (\$250.00) per calendar day will be made against the Contractor for the entire period that any part of the Work remains uncompleted or any required closeouts documents are not acceptably submitted for more than thirty (30) days after the date specified for the substantial Completion of the Work, the amount of which shall be deducted by the owner, and shall be retained by the Owner out of monies otherwise due the Contractor in the final payment, not as a penalty, but as liquidated damages sustained.

(Paragraphs deleted)

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the 25th of the month.

§ 5.1.3 Provided that an Application for Payment in acceptable format is received by the Architect not later than the first 1st day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the tenth 10th day of the following month. If an Application for Payment in acceptable format is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than Forty (40) days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This accepted schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201, General Conditions of the Contract for Construction (including Owner's then current Modifications), and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;

- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing and insured as specified.
- .3 Completed work shall be determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.6.3 Any Progress Payment shall include partial release of liens for material and labor for previous application for payment amount approved and paid. The DBE Utilization Report shall be included with the pay application.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

Five percent (5%) of the first fifty percent (50%) of the completed work and after fifty percent (50%) completion has been accomplished, no further retainage shall be held from the original Contract Sum. Increases in the contract sum by Change Order shall also be subject to retainage.

§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

N/A

§ 5.1.7.2

(Paragraphs deleted)

Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:

(Insert any other conditions for release of retainage upon Substantial Completion.)

The net amount of the Retainage shall be equal to two and one half percent (2.5%) of total Contract Sum, as increased or decreased by Change Order.

(Paragraphs deleted)

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner’s prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final monthly progress payment, constituting the entire unpaid balance of the Contract Sum, less retainage, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201 (including Owner's then-current modifications which may be obtained from the Owner or, alternatively, a copy of which is incorporated in the Project Manual and incorporated by reference herein as a part thereof), and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a Certificate of Substantial Completion has been issued by the Architect/Owner and the project accepted.

§ 5.2.2 The Owner's final payment to the Contractor of retainage shall be made as follows:

The final two and one half percent (2.5%) of the total Contract Sum retained will not be paid until proof of publication is submitted and all written claims paid in full. Contractor to submit the following:

- Contractor's Affidavit of Payment of Debts and Claims (AIA form G706, included in contract documents) with
 - a.) Contractor's Release or Waiver of Liens
 - b.) Releases or Waivers of Liens from Subcontractors and Material and Equipment Suppliers;
- Contractor's Affidavit of Release of Liens (AIA form G706A, included in contract documents);
- Consent of Surety, if any, to final payment (AIA form G707, included in contract documents);
- Any additional close out requirements per the contract documents; and
- Notarized Affidavit of Notice of Completion advertisement from publisher.

Contractor shall provide proof of publication of Notice of Completion in a local newspaper once per week for four (4) consecutive weeks, as required in the Title 39, Section 39-1-1, Subsection (f), of the Code of Alabama quoted below. "The Contractor shall, immediately after the completion of the contract, give notice of Completion by an advertisement in a newspaper of general circulation published within the city or county in which the work has been done, for a period of four (4) consecutive weeks. A final settlement shall not be made upon the contract until the expiration of thirty (30) days after the completion of the notice. Proof of publication of the notice shall be made by the contractor to the authority by whom the contract was made by affidavit of the publisher and a printed copy of the notice published. If no newspaper is published in the county in which the work is done, the notice may be given by the contract." (Acts 1927, No. 39, 9.37; Acts 1935, No. 39, 9. 70; Code 1940, T. 50, Section 16; Acts 1983, No. 83-737, 9.1203; Acts 1989, No. 89-650m 9. 1284, Section 1; Acts 1994, No. 94-207, p. 270, Section 1; Acts 1997, No. 97-225, p. 348, Section 1.)

The Notice of Completion shall read as follows:

STATE OF ALABAMA
 COUNTY OF MOBILE
 NOTICE OF COMPLETION

In accordance with Chapter I, Title 39, Code of Alabama, 1975, NOTICE IS HEREBY given that Contractor name has completed the contract for Figures Park – Combo Field Improvements, 658 Donald Street C, Mobile, Alabama 36617, PR-066-22 and Trinity Gardens Park – Combo Field Improvements, 3100 Bank Avenue, Mobile, Alabama 36617, PR-040-22. All persons having any claims for labor, material or otherwise in connection with this project should immediately notify the Architectural Engineering Department, City of Mobile, P. O. Box 1827, Mobile, Alabama 36633-1827.

Publication of the Notice of Completion shall not begin until the Project has been accepted as Substantially Complete by the City of Mobile.

(Paragraphs deleted)

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Engineer will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

Init.

N/A

§ 6.2 Binding Dispute Resolution

For any Claim, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

[X] Litigation in a court of competent jurisdiction

§ 6.3 Governing Law and Venue

(Paragraph deleted)

This Agreement shall be governed by the laws of the State of Alabama, and the appropriate venue of any actions arising out of this Agreement shall be a court of proper jurisdiction in Mobile, Alabama.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201, General Conditions of the Contract for Construction, including Owner's then-current modifications, a copy of which is incorporated in the contract documents and incorporated by reference herein as a part thereof.

(Paragraphs deleted)

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201, General Conditions of the Contract for Construction, including Owner's then-current modifications, a copy of which is incorporated in the contract documents and incorporated by reference herein as a part thereof.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents. A copy of such amended, revised or supplemental provision is incorporated in the contract documents and hereby incorporated by reference herein as a part thereof.

§ 8.2 The Owner's representative:
(Name, address, email address, and other information)

Director, REAM
P.O. Box 1827
Mobile, Alabama 36633-1827

§ 8.3 The Contractor's representative:
(Name, address, email address, and other information)

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten (10) days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth below:
The Contractor shall purchase and maintain from a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

Init.

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18 of the General Conditions of the Contract for Construction.

The Contractor shall take out and maintain during the life of the Contract no less than the following amounts of insurance with the City of Mobile named as an additional insured. Contractor shall submit a Certificate of Insurance. Insurance companies listed as the "Companies Affording Coverage" shall be authorized by the Secretary of the State of Alabama. Insurance produced out of the State of Alabama must be signed or counter signed by a licensed Agent of Alabama, with the Agent's name, address and telephone number typed or printed on the face of the Certificate of Insurance.

- .1 Workmen's Compensation Insurance: - Statutory-amount and coverage as required by all applicable laws, rules or regulations of the State of Alabama and the United States of America, Including the U. S. Longshore and Harbor Workers Act and the Jones Act, if applicable.
- .2 Employee's Liability Insurance shall be provided for limits of liability not less than:
 - A. Bodily Injury by Accident \$1,000,000 each accident
 - B. Bodily Injury by Disease \$1,000,000 each employee
 - C. Bodily Injury by Disease \$1,000,000 each policy
- .3 United States Longshoreman's Harbor Worker's Act.
- .4 Jones Act Coverage (if applicable) placed either in the Workers Compensation or through the Marine General Liability.
- .5 The Contractor shall provide Broad Form (commonly termed Comprehensive) General Liability Insurance (including premises-product-completed operations, independent contractors, and blanket contractual liability), specifically covering the obligations assumed by the Contractor for limits of liability not less than:
 - A. Bodily Injury \$1,000,000 each person
\$1,000,000 each occurrence
 - B. Property Damage \$1,000,000 each occurrence; or
 - C. Bodily Injury and Property Damage \$1,000,000 combined single limit
- .6 Such comprehensive policy shall include the following:
 - A. All liability of the Contractor, for the Contractor's Direct Operations.
 - B. Subcontractor's Operations.
 - C. Completed Operations Cover, thereby meaning any loss which shall occur after the contract has been completed, but which can be traced back to the Contract.
 - D. General Aggregate Limit of \$2,000,000 shall apply on a "Per Project" Basis.

- E. Contractual Liability, meaning thereby; any risk assumed by the Contractor under Hold Harmless Agreements or any other assumption of liability, but specifically items 11.1.1.8.3G herein below
- F. Broad Form Property Damage Coverage, including Completed Operations.
- G. Personal Injury Liability, with employee's exclusions removed.
- H. Explosion and Collapse Hazard:
Included or X Not Applicable.
- I. Underground Hazard:
Included or X Not Applicable.

.7 The Contractor shall carry for himself and shall require that all Subcontractors and all Owners of Automobiles or trucks rented or hired on the contract carry, until the Contracts is completed, Comprehensive Automobile Liability Coverage for Bodily Injury and property. Damage for any auto in amounts not less than the minimum amounts as indicated. The Contractor and Subcontractor shall also carry for themselves insurance for all non-owned and hired automobile at the limits of liability as indicated below:

- A. Bodily Injury \$1,000,000 each person
\$1,000,000 each occurrence
- B. Property damage \$1,000,000 each occurrence; or,
- C. Bodily Injury and Property damage \$1,000,000 combined single limit

.8 Umbrella/Excess Liability: \$2,000,000 combined single limit each occurrence for bodily injury and/or property damage

Verify Umbrella with PM

.9 Builder's Risk Coverage (Property Insurance): The Contractor shall carry for the Owner, himself, and all Subcontractors a Builder's Risk Policy to cover the full amount of the Contract during construction, fabrication or erection of any equipment.

- A. The Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors, Sub-subcontractors, and the Design Professionals in the Project.
- B. Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.
- C. If the property insurance requires deductibles, the Contractor shall pay costs not covered because of such deductibles. Deductibles shall be limited to a maximum of \$2,500.00 unless the loss is caused by windstorm; then deductible shall be a maximum of three percent (3%) of the insured value.

- D. This property insurance shall cover the full value of equipment, material, and other portions of the Work stored off the site, and also portions of the Work in transit. There shall be no limits on the value of loss per occurrence.
 - E. A named storm endorsement is required. The deductible shall be a maximum of three percent (3%) of the insured value.
- .10 A Surety authorized to do business in the State of Alabama shall furnish the required Insurance.
 - .11 The standard ACORD™ format shall be provided. The ACORD™ Certificate must be signed or countersigned by a Licensed Resident Agent of the State of Alabama and the agent's name, address and telephone number must appear on the face of the certificate.
 - .12 The Surety must have a minimum rating of A/Class VI as reported in the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc. if the bid price exceeds \$50,000.00.
 - .13 "In Rem" endorsement.

The insurance shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

Certificates of insurance acceptable to the Owner shall be filed with the Owner within ten (10) calendar days from date of issuance of contract forms for execution. Contractor shall deliver to the City of Mobile, certificates of insurance certifying the existence and limits of the insurance coverages along with separate policy endorsements. Contractor shall also be responsible for delivering policy renewal certificates to the City of Mobile, and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies shall contain a provision that coverages afforded under the policies will not be cancelled subject to non-renewal nor material change, or allowed to expire without at least thirty (30) days' (except ten (10) days from non-payment) prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the time. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

All policies of insurance, except worker's compensation, shall be endorsed to provide that all such insurances are primary and non-contributing with any other insurance maintained by the City of Mobile and endorsed to waive rights of subrogation in favor of the City of Mobile.

The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 8.5.2 The Contractor shall provide bonds as set forth below:

Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder.

Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

The Labor and Material Payment Bond and the Performance Bond shall each be for one hundred percent (100%) of the Contract Sum.

1. Bond shall be submitted with the executed agreement on provided form(s).
2. Power of Attorney is required for both bonds.
3. A Surety authorized to do business in the State of Alabama shall furnish both bonds.
4. A Surety licensed to do business in the State of Alabama must execute the bonds.
5. The Surety must have a minimum rating of A/Class VI as reported in the latest issue of Best's Key Rating Guide Property-Casualty, published by Alfred M. Best Company, Inc., if the bid price exceeds \$50,000.00.
6. The Surety company shall be required to execute AIA Document G-707, "Consent of Surety to Final Payment" prior to Final Payment being made to the Contractor.

§ 8.6

(Paragraphs deleted)

Indemnification:

Contractor shall indemnify, defend and hold harmless City and its officers, elected officials, agents, representatives, and employees in respect of any and all claims, injuries, losses, diminution in value, damages, liabilities, whether or not currently due, and related expenses (including without limitation, settlement costs and any legal or other expenses for investigating or defending any actions or threatened actions) arising from or in connection with Contractor's performance under this agreement, including but not limited to, environmental laws, regulations, orders and decrees of whatever character or nature and damage or injury to persons or property. Contractor hereby confirms and agrees that Contractor is not a 'design professional' as defined in Alabama Act 2021-318, and not required to carry professional liability insurance for the performance or obligations of this contract.

§ 8.7 Other provisions:

Contractor shall provide a minimum one (1) year warranty from the date of substantial completion of all Labor and Materials for the Work covered by this contract, unless otherwise specified. Labor and Material warranties required by other sections of the construction document shall not conflict with this provision. The most stringent warranty provision shall apply.

§ 8.8 Force Majeure:

In the event that either party hereto shall be delayed or hindered in or prevented from the performance of any act required hereunder by reason of strikes, lockouts, labor troubles, inability to procure materials, failure of power, restrictive governmental laws or regulations, riots, insurrection, war, Act of God, or other reason of a like nature not the fault of the party delayed in performing work or doing acts required under the terms of this Agreement, then performance of such act shall be excused for the period of the delay and the period for the performance of any such act shall be extended for a period equivalent to the period of such delay.

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor

(Paragraph deleted)

- .2 AIA Document A201, General Conditions of the Contract for Construction, including Owner's then-current modifications, a copy of which is incorporated in the contract documents and incorporated by reference herein as a part thereof.

Init.

AIA Document A101 – 2017. Copyright © 1915, 1918, 1925, 1937, 1951, 1958, 1961, 1963, 1967, 1974, 1977, 1987, 1991, 1997, 2007 and 2017. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are registered trademarks of The American Institute of Architects. This document was produced at 08:58:27 ET on 08/29/2023 under Order No.3104238820 which expires on 06/30/2024, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents® Terms of Service. To report copyright violations, e-mail docinfo@aiaccontracts.com.

User Notes:

(1634547000)

.3 Drawings
i) Figures Park

Number	Title	Date
1.0	Cover Sheet	September 10, 2023
	Survey	September 10, 2023
1.1	Existing Conditions / Demolition	September 10, 2023
1.2	Erosion & Sediment Control Plan	September 10, 2023
C01	Civil Construction Details	September 10, 2023
CO2	Field Layout Plan	September 10, 2023
L-1.2	Field Grading Plan	September 10, 2023
L-1.3	Field Irrigation Plan	September 10, 2023
L-1.4	Painting Plan	September 10, 2023
L-1.5	Field Details	September 10, 2023
L-5.0	Irrigation Details	September 10, 2023
L-5.1		

ii) Trinity Park

Number	Title	Date
1.0	Cover Sheet	September 10, 2023
1.1	Survey	September 10, 2023
1.2	Existing Conditions / Demolition	September 10, 2023
C01	Grading & Drainage Plan	September 10, 2023
CO2	Erosion & Sediment Control Plan	September 10, 2023
C03	Civil Details	September 10, 2023
C04	Civil Details	September 10, 2023
L-1.2	Field Layout Plan	September 10, 2023
L-1.3	Infield Enlargement	September 10, 2023
L-2.0	Irrigation Plan	September 10, 2023
L-5.0	Irrigation Details	September 10, 2023
L-5.1	Field Details	September 10, 2023

.4 Specifications

Section	Title	Date
DIVISION 1	General Requirements	September 10, 2023 September 10, 2023
Section 01010	Summary of the Work	September 10, 2023 September 10, 2023
Section 01210	Allowances	September 10, 2023 September 10, 2023
Section 01220	Unit Prices	September 10, 2023 September 10, 2023
Section 01310	Project Management & Coordination	September 10, 2023 September 10, 2023
Section 01320	Construction Progress Documentation	September 10, 2023 September 10, 2023
Section 01330	Submittal Procedures	September 10, 2023
Section 01600	Product Requirements	September 10, 2023
Section 01700	Execution Requirements	
Section 01710	Closeout Procedures	
Section 017839	Project Record Documents	
Section 017823	Operation and Maintenance Data	

i) Figures Park

Section	Title	Date
DIVISION 02:	SITE CONSTRUCTION	September 10, 2023 September 10, 2023
Section 02230	Site Clearing	September 10, 2023 September 10, 2023
Section 02300	Earthwork	September 10, 2023 September 10, 2023
Section 024100	Site Demolition	September 10, 2023 September 10, 2023
DIVISION 03	CONCRETE	September 10, 2023 September 10, 2023
Section 033000	Cast in Place Concrete Structural Concrete	September 10, 2023 September 10, 2023

DIVISION 11:	EQUIPMENT	September 10, 2023
Section 116833	Athletic Field Equipment	September 10, 2023
DIVISION 32:	EXTERIOR IMPROVEMENTS	September 10, 2023
Section 321313	Cement Concrete Pavement	
Section 328400	Playing Field Irrigation	
Section 329100	Playing Field Construction	
Section 329113	Soil Preparation	
Section 329200	Playing Field Sodding	

ii) Trinity Park		
Section	Title	Date
DIVISION 02:	SITE CONSTRUCTION	September 10, 2023
Section 02230	Site Clearing	September 10, 2023
Section 02300	Earthwork	September 10, 2023
Section 024100	Site Demolition	September 10, 2023
Section 02630	Storm Drainage	September 10, 2023
DIVISION 03:	CONCRETE	September 10, 2023
Section 033000	Cast in Place Concrete Structural Concrete	September 10, 2023
DIVISION 11:	EQUIPMENT	September 10, 2023
Section 116833	Athletic Field Equipment	September 10, 2023
DIVISION 32:	EXTERIOR IMPROVEMENTS	September 10, 2023
Section 323113	Chain Link Fence & Gates	
Section 328400	Playing Field Irrigation	
Section 329100	Playing Field Construction	
Section 329113	Soil Preparation	
Section 329200	Playing Field Sodding	

.5 Addenda, if any:

Number	Date
---------------	-------------

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

(Paragraph deleted)

.6 Other Exhibits:

(Paragraphs deleted)

§ 9.2

(Paragraph deleted)

Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
N/A			

§ 9.2.1 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

BIDDING AND CONTRACT REQUIREMENTS

Section 00100	Invitation to Bid
Section 00200	Instructions to Bidders-AIA Document A701-2018

Section 00300	Supplementary Instructions to Bidders
Section 00400	Bid Form – Figures Park
	Bid Form – Trinity Park
	Accounting of Sales Tax Form C-3A – Figures Park
	Accounting of Sales Tax Form C-3A – Trinity Park
	Office of Supplier Diversity Subcontracting and Major Supplier Plan – Figures Park
	Office of Supplier Diversity Subcontracting and Major Supplier Plan – Trinity Park
Section 00500	Standard Form of Agreement Between Owner and Contractor
	AIA Document A101
Section 00600	Bonds, Certificates and Affidavits
	Performance Bond
	Labor and Material Payment Bond
	E-Verify Documentation (Sample)
	Application and Certificate for Payment-AIA Document G702and G703 with DBE Utilization Report
	Certificate of Substantial Completion-AIA Document G704
	Contractor’s Affidavit of Payment of Debts and Claims-AIA Document G706
	Contractor’s Affidavit of Release of Liens-AIA Document G706A
	Consent of Surety to Final Payment-AIA Document G707
	Request for Taxpayer Identification Number and Certification W9 Tax Form and City of Mobile Vendor Information Form
Section 00700	General Conditions of the Contract for Construction-AIA Document A201

§ 9.2.2 Best Management Practices (BMPs): The Contractor shall be responsible for providing, implementing and maintaining BMPs for sediment and erosion control in full compliance with all applicable Local, State and Federal Codes and Ordinances throughout the contract period. All Work shall be in accordance with the Clean Water Act; the Alabama Water Pollution Control Act; the current version of the Alabama Handbook for Erosion Control, Sediment Control Storm water Management on Construction sites and Urban Areas; and the current version of the Mobile, Alabama City Code Chapter 17 Storm water Management and Flood Control. All Wastewater with oils, grease, paint, mortar, etc., shall be properly contained and disposed of.

§ 9.2.3 Contractor shall comply with all Federal, State and local laws concerning nondiscrimination, including but not limited to City of Mobile Ordinance No. 14-034 which requires, *inter alia*, that all contractors performing work for the City of Mobile not discriminate on the basis of race, creed, color, national origin or disability, require that all subcontractors they engage do the same, and make every reasonable effort to assure that fifteen percent of the work performed under contract be awarded to socially and economically disadvantaged individuals and business entities.

§ 9.2.4 By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.

§ 9.2.5 Public Contracts with Entities Engaging in certain Boycott Activities:
By signing this contract, the Contractor further represents and agrees that it is not currently engaged in, nor will it engage in, any boycott of a person or entity based in or doing business with a jurisdiction with which the State of Alabama can enjoy open trade.

§ 9.2.6 Severability Clause:
In case any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement, but this Agreement shall be construed as if such invalid or illegal or

unenforceable provision had never been contained herein. Upon such determination that any term or other provision is invalid, illegal or unenforceable, the court or other tribunal making such determination is authorized and instructed to modify this Agreement so as to effect the original intent of the parties as closely as possible so that the transactions and agreements contemplated herein are consummated as originally contemplated to the fullest extent possible.

§ 9.2.7 Non-Agency Clause:

Contractor, in the performance of its operations and obligations hereunder, shall not be deemed to be an agent of City but shall be deemed to be an independent Contractor in every respect and shall take all steps at its own expense, as City may from time to time request, to indicate that it is an independent Contractor. City does not and will not assume any responsibility for the means by which or the manner in which the services by Contractor provided for herein are performed, but on the contrary, Contractor shall be wholly responsible therefore.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

This Agreement entered into as of the day and year first written above.

Init.

/

Owner: City of Mobile

Legal Name of Party to Contract:
Contractor:

OWNER *(Signature)*

CONTRACTOR *(By Signature)*

William S. Stimpson, Mayor
(Rows deleted)
(Printed name and title)

(Printed name and title)

ATTEST:

City Clerk

STATE OF _____
COUNTY OF _____

Before me, the undersigned a Notary Public in and for said County and State, personally appeared <Individual NAME> as <Title within Company> of <Company Legal Name> and after being duly sworn, did depose and say that he, as such officer and with full authority, signed the above and foregoing voluntarily as the act of said corporation on the day the same bears date.
Sworn to and subscribed for me this _____ day of _____, 20_____.

NOTARY PUBLIC
My Commission Expires: _____

**EXHIBIT A
SCOPE OF WORK**

FIGURES PARK – COMBO FIELD IMPROVEMENTS

Project #CN-066-22

The work of this contract consists of the demolition of an existing baseball field infield area, regraded and installing new sod, irrigation, foul poles, bases and a new batting cage.

TRINITY GARDENS PARK – COMBO FIELD IMPROVEMENTS

Project #CN-066-22

The work of this contract consists of the demolition of an existing combo field area, regraded and installing new drainage, sod, irrigation, foul poles, bases and a new batting cage.

END OF SCOPE OF WORK

SECTION 00600

BONDS, CERTIFICATES AND AFFIDAVITS

PART 1 GENERAL

This section includes the Bond Forms and Certificates that are to be used on this Project. No other forms will be accepted. Forms may be obtained from the Architectural Engineering Department, City of Mobile, telephone number 251-208-7454.

1.1 FORMS

- A. PERFORMANCE BOND. Owner's modified Performance Bond form.
- B. LABOR AND MATERIAL PAYMENT BOND. Owner's modified Payment Bond form.
- C. E-Verify Documentation (Sample)
- D. APPLICATION AND CERTIFICATION FOR PAYMENT - AIA Document G702 and AIA Document G703 (for projects over \$250,000.00, include DBE Utilization Report).
- E. CERTIFICATE of SUBSTANTIAL COMPLETION – AIA Document G704-2017
- F. CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS - AIA Document G706
- G. CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS - AIA Document G706A.
- H. CONSENT OF SURETY TO FINAL PAYMENT - AIA Document G707
- I. Request for Taxpayer Identification Number and Certification, W-9 Form, and City of Mobile Vendor Information Form

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner or other Party shall be considered plural where applicable.

KNOW ALL MEN BY THESE PRESENTS: That the Contractor, _____, _____, hereinafter called the Principal, and _____, hereinafter called the Surety, are held and firmly bound unto the **City of Mobile, P. O. Box 1827, Mobile, AL 36633**, hereinafter called the Owner, in the penal sum of _____ and xx/100 Dollars (\$_____.00) for payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns for the faithful performance of a certain written Contract dated the ____ day of _____, 2023 entered into between the Principal and the City of Mobile for furnishing all labor, material, equipment and insurance and performing all Work required to properly complete City of Mobile, Figures Park – Combo Field Improvements (PR-066-22) 658 Donald St. C., Mobile, Alabama, and/or City of Mobile, Trinity Gardens Park – Combo Field Improvements (PR-040-22) 3100 Bank Ave., Mobile, Alabama, a copy of which said Contract is incorporated herein by reference and is made a part hereof as if fully copied herein.

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall faithfully perform the terms and conditions of the Contract in all respects on its part and shall fully pay all obligations incurred in connection with the performance of such Contract on account of labor and materials used in connection therewith, and all such other obligations of every form, nature and character, and shall save harmless the Owner from all and any liability of every nature, kind and character which may be incurred in connection with the performance or fulfillment of such Contract or other such and liability resulting from negligence or otherwise on the part of such Principal and further save harmless the Owner from all cost and damage which may be suffered by reason of the failure to fully and completely perform said contract and shall fully reimburse and repay the Owner for all expenditures of every kind, character, and description which may be incurred by the Owner in making good any and every default which may exist on the part of the Principal in connection with the performance of said Contract; and further that the Principal shall pay all lawful claims of all persons, firms, partnerships, or corporations for all labor performed and material furnished in connection with the performance of the Contract, and that the failure to do so with such persons, firms, partnerships or corporations shall give them a direct obligation; and provided, however, that no suit, action, or proceedings by reason of any default whatever shall be brought on this bond after two years from the date on which the final payment on the Contract falls due, and provided, further, that if any alterations or additions which may be made under the Contract, or in the work to be done under it, or the giving by the Owner of any extensions of time for the performance of the Contract or any other forbearance being expressly waived. This obligation shall remain in full force and effect until the performance of all covenants, terms and conditions herein stipulated and after such performance, it shall become null and void.

In addition to any other legal mode of service, service of summons, and other process in civil actions brought in Mobile County may be had on the Contractor or the Surety on the bond by leaving a copy of the summons and complaint or other pleading or process with the Mayor of the City of Mobile which shall bind the principal Contractor and Surety to the mode of service above described and that the service shall be the same as personal service on the contractor or surety. This Bond is given pursuant to the terms of Alabama Code, Title 39-1-1, et. al., As Amended.

EXECUTED IN FOUR (4) COUNTERPARTS.

SIGNED, SEALED AND DELIVERED this ____ day of _____, 2023

CONTRACTOR AS PRINCIPAL

Company: _____
(Corporate Seal)

By: _____
(Signature)

Name and Title: _____

SURETY

Company: _____
(Corporate Seal)

By: _____
(Signature)

Name and Title: _____

Resident Agent: _____
(Signature)

Name and Title: _____
Company Name: _____
Address: _____
Phone and Fax: _____

Owner's Representative:
AE Department
PO Box 1827
Mobile, AL 36633
251-208-7454

LABOR AND MATERIAL PAYMENT BOND

Any singular reference to Contractor, Surety, Owner or other Party shall be considered plural where applicable.

KNOW ALL MEN BY THESE PRESENTS: That the Contractor, _____, _____, _____, as Principal, and _____, _____, _____, as Surety, are held and firmly bound unto the **City of Mobile, P. O. Box 1827, Mobile, AL 36633** (hereinafter called the "Obligee") in the penal sum of _____ and xx/100 (\$_____.00) lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Principal has entered into a certain Contract with said Obligee, dated the ____ day of _____, 2023 (hereinafter called the "Contract") for furnishing all labor, material, equipment and insurance and perform all work required to properly complete Figures Park – Combo Field Improvements (PR-066-22) 658 Donald St. C. and/or City of Mobile, Trinity Gardens Park – Combo Field Improvements (PR-040-22) 3100 Bank Ave., Mobile, Alabama, which, **THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH** that if said Principal and all subcontractors to whom any portion of work provided for in said Contract is sublet and all assignees of said Principal and of such subcontractors shall promptly make payments to all persons supplying him or them with labor, materials or supplies for or in the prosecution of the work provided for in such Contract, or in any amendment or extension of or additions to said Contract, and for the payment of reasonable attorney's fees, incurred by the claimant or claimants in suits on each bond, then the above obligations shall be void; otherwise to remain in full force and effect.

PROVIDED, however, that this bond is subject to the following conditions and limitations.

- (a) Any person, firm or corporation that has furnished labor, materials or supplies for or in the prosecution of the work provided for in said contract shall have a direct right of action against the Principal and Surety on this bond, which right of action shall be asserted in a proceeding instituted in the County in which the work provided for in said Contract is to be performed or in any county in which said Principal and Surety does business. Such right of action shall be asserted in a proceeding instituted in the name of the claimant or claimants for his or their use and benefit against said Principal and Surety or either of them (but not later than one year after the final settlement of said Contract) in which action such claim or claims shall be adjudicated and judgment rendered thereon.
- (b) The Principal and Surety hereby designate and appoint _____ **Attorney-In-Fact,** as the agent of each of them to receive and accept service of process or other pleading issued or filed in any proceeding instituted on this bond and hereby consent that such service shall be the same as personal service on the Principal and/or Surety. In addition to any other legal mode of service, service of summons, and other process in civil actions brought in Mobile County may be had on the Contractor or the Surety on the bond by leaving a copy of the summons and complaint or other pleading or process with the Mayor of the City of Mobile which shall bind the principal Contractor and Surety to the mode of service above described and that the service shall be the same as personal service on the contractor or surety.
- (c) The Surety shall not be liable hereunder for damage or compensation recoverable under any Workmen's Compensation or Employer's Liability Statute.
- (d) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action or proceeding thereon that is instituted later than two years after the final settlement of said Contract.
- (e) This bond is given pursuant to the terms of Alabama Code, Title 39-1-1, et. al., As Amended.

EXECUTED IN FOUR (4) COUNTERPARTS.

SIGNED, SEALED AND DELIVERED this ____ day of _____, 2023

CONTRACTOR AS PRINCIPAL
Company: _____
(Corporate Seal)

SURETY
Company: _____
(Corporate Seal)

By: _____
(Signature)

By: _____
(Signature)

Name and Title: _____

Name and Title: _____

Resident Agent: _____
(Signature)

Owner's Representative:
AE Department
PO Box 1827
Mobile, AL 36633
251-208-7454

Name and Title: _____
Company Name: _____
Address: _____
Phone and Fax: _____

Company ID Number:

Approved by:

Employer	
Name (Please Type or Print)	
Signature	Date
Department of Homeland Security, Division	
Name (Please Type or Print)	Title
Signature	Date

SAMPLE

Company ID Number:

Information Required for the E-Verify Program	
Information relating to your Company:	
Company Name	
Company Facility Address	
Company Alternate Address	
County or Parish	
Employer Identification Number	
North American Industry Classification Systems Code	
Parent Company	
Number of Employees	
Number of Sites Verified for	

SAMPLE

TO OWNER City of Mobile
P. O. Box 1827
Mobile, Alabama 36633-1827

APPLICATION NO:

Distribution to:

OWNER
ARCHITECT
CONTRACTOR

PERIOD TO:

FROM CONTRACTOR: VIA ARCHITECT:

PROJECT NO:

CONTRACT FOR:

CONTRACT DATE:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. Continuation Sheet, AIA Document G703, is attached.

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

- 1. ORIGINAL CONTRACT SUM \$ _____
- 2. Net change by Change Orders \$ _____
- 3. CONTRACT SUM TO DATE (Line 1 ± 2) \$ _____
- 4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) \$ _____
- 5. RETAINAGE:
 - a. _____ % of Completed Work \$ _____
(Column D + E on G703)
 - b. _____ % of Stored Material \$ _____
(Column F on G703)
- Total Retainage (Lines 5a + 5b or Total in Column I of G703) \$ _____
- 6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total) \$ _____
- 7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) \$ _____
- 8. CURRENT PAYMENT DUE \$ _____
- 9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6) \$ _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED\$ _____

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.) ARCHITECT:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this Month		
TOTALS		
NET CHANGES by Change Order		

CONTINUATION SHEET

AIA DOCUMENT G703

PAGE OF PAGES

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.

APPLICATION NO:
APPLICATION DATE:

In tabulations below, amounts are stated to the nearest dollar.

PERIOD TO:

Use Column I on Contracts where variable retainage for line items may apply.

ARCHITECT'S PROJECT NO:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		E THIS PERIOD	F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	% (G ÷ C)	H BALANCE TO FINISH (C - G)	I RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)							
GRAND TOTALS										

Users may obtain validation of this document by requesting of the license a completed AIA Document D401 - Certification of Document's Authenticity



AIA® Document G704® – 2017

Certificate of Substantial Completion

PROJECT: <i>(name and address)</i>	CONTRACT INFORMATION: Contract For: Date:	CERTIFICATE INFORMATION: Certificate Number: 001 Date:
OWNER: <i>(name and address)</i>	ARCHITECT: <i>(name and address)</i>	CONTRACTOR: <i>(name and address)</i>

The Work identified below has been reviewed and found, to the Architect's best knowledge, information, and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of the Project or portion designated below is the date established by this Certificate.
(Identify the Work, or portion thereof, that is substantially complete.)

_____ ARCHITECT <i>(Firm Name)</i>	_____ SIGNATURE	_____ PRINTED NAME AND TITLE	_____ DATE OF SUBSTANTIAL COMPLETION
--	---------------------------	--	--

WARRANTIES

The date of Substantial Completion of the Project or portion designated above is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:
(Identify warranties that do not commence on the date of Substantial Completion, if any, and indicate their date of commencement.)

WORK TO BE COMPLETED OR CORRECTED

A list of items to be completed or corrected is attached hereto, or transmitted as agreed upon by the parties, and identified as follows:
(Identify the list of Work to be completed or corrected.)

The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Unless otherwise agreed to in writing, the date of commencement of warranties for items on the attached list will be the date of issuance of the final Certificate of Payment or the date of final payment, whichever occurs first. The Contractor will complete or correct the Work on the list of items attached hereto within () days from the above date of Substantial Completion.

Cost estimate of Work to be completed or corrected: \$

The responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work, insurance, and other items identified below shall be as follows:
(Note: Owner's and Contractor's legal and insurance counsel should review insurance requirements and coverage.)

The Owner and Contractor hereby accept the responsibilities assigned to them in this Certificate of Substantial Completion:

_____ CONTRACTOR <i>(Firm Name)</i>	_____ SIGNATURE	_____ PRINTED NAME AND TITLE	_____ DATE
_____ OWNER <i>(Firm Name)</i>	_____ SIGNATURE	_____ PRINTED NAME AND TITLE	_____ DATE



AIA[®]

Document G706™ – 1994

Contractor's Affidavit of Payment of Debts and Claims

PROJECT: <i>(Name and address)</i>	ARCHITECT'S PROJECT NUMBER:	OWNER: <input type="checkbox"/>
		ARCHITECT: <input type="checkbox"/>
	CONTRACT FOR: General Construction	CONTRACTOR: <input type="checkbox"/>
TO OWNER: <i>(Name and address)</i>	CONTRACT DATED:	SURETY: <input type="checkbox"/>
		OTHER: <input type="checkbox"/>

STATE OF:
COUNTY OF:

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or Owner's property might in any way be held responsible or encumbered.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

- Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose

Indicate Attachment Yes No

CONTRACTOR: *(Name and address)*

BY: _____
(Signature of authorized representative)

(Printed name and title)

The following supporting documents should be attached hereto if required by the Owner:

- Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
- Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.
- Contractor's Affidavit of Release of Liens (AIA Document G706A).

Subscribed and sworn to before me on this date:

Notary Public:
My Commission Expires:



AIA[®] Document G706A[™] – 1994

Contractor's Affidavit of Release of Liens

PROJECT: <i>(Name and address)</i>	ARCHITECT'S PROJECT NUMBER:	OWNER: <input type="checkbox"/>
	CONTRACT FOR: General Construction	ARCHITECT: <input type="checkbox"/>
TO OWNER: <i>(Name and address)</i>	CONTRACT DATED:	CONTRACTOR: <input type="checkbox"/>
		SURETY: <input type="checkbox"/>
		OTHER: <input type="checkbox"/>

STATE OF:
COUNTY OF:

The undersigned hereby certifies that to the best of the undersigned's knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services who have or may have liens or encumbrances or the right to assert liens or encumbrances against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

CONTRACTOR: *(Name and address)*

BY:

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:



AIA[®]

Document G707™ – 1994

Consent Of Surety to Final Payment

PROJECT: *(Name and address)*

ARCHITECT'S PROJECT NUMBER:

OWNER:

CONTRACT FOR: General Construction

ARCHITECT:

TO OWNER: *(Name and address)*

CONTRACT DATED:

CONTRACTOR:

SURETY:

OTHER:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(Insert name and address of Surety)

on bond of
(Insert name and address of Contractor)

, SURETY,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the
Surety of any of its obligations to
(Insert name and address of Owner)

, CONTRACTOR,

as set forth in said Surety's bond.

, OWNER,

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:
(Insert in writing the month followed by the numeric date and year.)

(Surety)

(Signature of authorized representative)

Attest:
(Seal):

(Printed name and title)

**CITY OF MOBILE, AL
VENDOR INFORMATION FORM**

Company Information:

1. City Vendor Number:

2. Name of Company:

3. Company D.B.A. Name, if any:

4. Mailing Address:

5. Remittance Address:

6. Telephone:

7. Fax

8. Main Email:

Primary Contact:

9. Contact Name and Title:

10. Contact Phone:

11. Contact Fax:

12. Contact Email:

Alternate Contact (if applicable):

13. Alt. Contact Name and Title:

14. Alt. Contact Phone:

15. Alt. Contact Fax:

16. Alt. Contact Email:

City of Mobile Business License Information:

17. City of Mobile Business License No. (if required):

Please attach additional sheets if necessary.

Request for Taxpayer Identification Number and Certification

**Give Form to the
 requester. Do not
 send to the IRS.**

Print or type See Specific Instructions on page 2.	Name (as shown on your income tax return)	
	Business name/disregarded entity name, if different from above	
	Check appropriate box for federal tax classification: <input type="checkbox"/> Individual/sole proprietor <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ <input type="checkbox"/> Other (see instructions) ▶ _____	
	<input type="checkbox"/> Exempt payee	
	Address (number, street, and apt. or suite no.)	Requester's name and address (optional)
City, state, and ZIP code		
List account number(s) here (optional)		

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Social security number									

Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Employer identification number									

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
3. I am a U.S. citizen or other U.S. person (defined below).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 4.

Sign Here	Signature of U.S. person ▶	Date ▶
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

Figures Park & Trinity Gardens Park
Combo Field Improvements
Mobile, AL - PR-066-22 & PR-040-22

SECTION 00700

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, AIA DOCUMENT A201 - 2007

PART 1 GENERAL

This section includes the GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, AIA Document A-201, that is to be used for this Project. The document has been electronically modified to meet the City of Mobile's requirements and shall be used for the project.



AIA® Document A201® – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Figures Park – Combo Field Improvements
658 Donald Street C
Mobile, Alabama 36617
and
Trinity Gardens Park – Combo Field Improvements
3100 Bank Avenue
Mobile, Alabama 36617

THE OWNER:

(Name, legal status and address)

City of Mobile
PO Box 1827
Mobile, Alabama 36633-1827

THE ARCHITECT:

(Name, legal status and address)

Espalier, LLC
P.O. Box 1247
Fairhope, Alabama 36533

TABLE OF ARTICLES

- 1 GENERAL PROVISIONS
- 2 OWNER
- 3 CONTRACTOR
- 4 ARCHITECT
- 5 SUBCONTRACTORS
- 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
- 7 CHANGES IN THE WORK
- 8 TIME
- 9 PAYMENTS AND COMPLETION
- 10 PROTECTION OF PERSONS AND PROPERTY
- 11 INSURANCE AND BONDS

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.

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User Notes:

(1664501347)

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13	MISCELLANEOUS PROVISIONS
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1.5.2, 3.4.2, 3.7.4, 3.12.8, 3.14.2, 4.1.2, 9.3.2, 9.10.3,
13.2, 13.3.2, 15.4.4.2

Written Interpretations
4.2.11, 4.2.12

Written Orders
1.1.1, 2.4, 3.9, 7, 8.2.2, 12.1, 12.2, 13.4.2, 14.3.1

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document

G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and

delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will

specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;

- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

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- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will

promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act

or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 **Failure to Purchase Required Property Insurance.** If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 **Notice of Cancellation or Expiration of Owner's Required Property Insurance.** Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and

approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.



SECTION 01010

SUMMARY OF THE WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Summary of Work: Contract, contractor use of premises.
- B. Contract Considerations: Contingency allowance, schedule of values, applications for payment, change procedures, alternates.
- C. Coordination and Meetings: Coordination, field engineering, cutting and patching, meetings, progress meetings, examination, preparation.
- D. Submittals: Submittal procedures, construction progress schedules, proposed products list, shop drawings, product data, samples, manufacturers' installation instructions, manufacturers' certificates.
- E. Quality Control: Quality assurance - control of installation, Tolerances, References, Mock-ups, Manufacturers' field services and reports.
- F. Construction Facilities and Temporary Controls: Electricity, temporary lighting for construction purposes, heat, temporary ventilation, telephone service, water service, temporary sanitary facilities, barriers and fencing, exterior enclosures, protection of installed work, security, access roads, parking, progress cleaning and waste removal, project identification, field offices and sheds, removal of utilities, facilities, and controls.
- G. Material and Equipment: Products, transportation, handling, storage, and protection, products options, substitutions.
- H. Contract Closeout: Contract closeout procedures, final cleaning, adjusting, project record documents, operation and maintenance data, spare parts and maintenance materials, warranties.

1.2 CONTRACT

- A. Summary of Work:
 - 1. Figures Park Base Bid: The project consists of the demolition of an existing baseball field infield area in order to regrade and reinstall new infield clay, sodding, irrigation, foul poles, & bases in new condition. Also includes the installation of a batting cage & concrete batting cage slab, as well as painting existing dugouts.

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2. Trinity Gardens Park Base Bid: The project consists of the demolition of an existing baseball field and construction of a new natural baseball/football combo field with improved drainage. New infield, bases, outfield fencing, foul poles, drain piping & inlets, sodding, & irrigation.

- B. Contract Description: Stipulated sum.

1.3 CONTRACTOR USE OF PREMISES

- A. Limit use of premises to allow continued Public use and Owner occupancy. All facilities shall remain in use except the immediate work area for this project. Obey all Facility Regulations and coordinate access and schedule of work with Architect.

1.4 CONTINGENCY ALLOWANCE

- A. Include in the Contract the stipulated amount for use upon Owner's instruction.
- B. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit are included in Change or Field Orders authorizing expenditure of funds from this Contingency Allowance.

1.5 SCHEDULE OF VALUES

- A. Submit Schedule of Values on AIA Form G703 for review within five (5) calendar days of notification of project award.

1.6 APPLICATIONS FOR PAYMENT

- A. Submit two signed and notarized originals of each application on AIA Form G702 with AIA Form G703. Submit Lien Release Waivers, including from subcontractors and major suppliers, with each pay application. For contracts \$250,000.00 or greater, include completed DBE Compliance Utilization Report with each Pay Application.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Payment Period: Monthly, except for final payment of retainage after all Close Out documents are submitted and approved.

1.7 CHANGE ORDER PROCEDURES

- A. All contract changes involving a change in scope, payment and/or time shall be made by change order.

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- B. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation or Contractor's request for a Change Order as approved by Owner.

1.8 ALTERNATE BID ITEMS & BID OPTIONS

- A. Alternates quoted on Bid Form, if any, will be reviewed and accepted in the order listed. One or more Bid options may be accepted.
- B. Coordinate related Work and modify surrounding Work as required.
- C. Schedule of Alternates: Listed on bid form, as applicable.

1.9 COORDINATION

- A. Coordinate scheduling, submittals, and Work at the facility to ensure an efficient and orderly sequence and to facilitate the continued uninterrupted use of the Facility.

1.10 FIELD ENGINEERING

- A. Establish elevations, lines, and levels and certify that elevations and locations of the Work conform to the Contract Documents. Verify existing conditions.
- B. Contractor shall field verify all measurements and quantities required for a complete installation.

1.11 PRECONSTRUCTION MEETINGS

- A. Architect will schedule a pre-construction meeting after contract award for all affected parties.

1.12 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at pre-approved intervals.
- B. Preside at meetings, record minutes, and distribute copies within two days to those affected by decisions made.

1.13 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial progress schedule in duplicate within five (5) calendar days after date of notice of award of project for Architect's review.
- B. Submit revised schedules with each Application for Payment, identifying changes

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since previous version. Indicate estimated percentage of completion for each item of Work at each submission.

1.14 SHOP DRAWINGS

- A. Shop Drawings for Review: Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.
- B. Submit four copies for use by the owner plus the number of copies that Contractor requires. Electronic submittals may be acceptable with prior approval of the Architect and Owner. Close Out documents shall include electronic and hard copies of all submittals.

1.15 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' written instructions.
- C. Comply with specified standards as minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- D. Supply certification from manufacturer that the installed Work meets or exceeds all manufacturers' requirements.

1.16 EXAMINATION

- A. Verify that existing site conditions and subsurfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that utility services are available, of the correct characteristics, and in the correct location.

1.17 PREPARATION

- A. Prepare surfaces prior to applying next material installation.

1.18 TOLERANCES

- A. Monitor fabrication and installation tolerance control of installed Products over suppliers, manufacturers, Products, site conditions, and workmanship, to produce acceptable Work. Do not permit tolerances to accumulate. Comply fully

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with manufacturers' tolerances.

1.19 REFERENCES

- A. Conform to reference standards by date of issue current as of date of Contract Documents.
- B. Should specified reference standard conflict with Contract Documents, request clarification from Architect before proceeding.

1.20 ELECTRICITY

- A. Unless otherwise provided for, Contractor shall be allowed to utilize power from the facility in moderate amounts.
- B. Provide power outlets for construction operations, branch wiring, distribution boxes, and flexible power cords as required.

1.21 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

- A. Provide and maintain temporary lighting for construction operations as may be required.
- B. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.

1.22 WATER SERVICE

- A. Owner shall provide suitable potable water in moderate quantities without cost to the Contractor.

1.23 TEMPORARY SANITARY FACILITIES

- A. Contractor shall provide temporary sanitary facilities and shall place them in a location approved by the project manager. Lockable facilities are recommended.

1.24 BARRIERS AND FENCING

- A. Provide barriers and fencing to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from dust, debris and damage.

1.25 PROTECTION OF INSTALLED WORK

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- A. Protect installed Work and provide special protection where specified in individual specification sections. Prohibit traffic or storage upon grass or paving surfaces. Contractor is responsible for cost of repair or replacement.

1.26 SECURITY

- A. Provide security and facilities to protect Work and existing facilities from unauthorized entry, vandalism, or theft.

1.27 ACCESS ROADS & HAULING

- A. Maintain temporary access routes through the public thoroughfare and parking areas to serve the construction area as required without obstructing traffic or blocking access for Owner and the Public. Provide drive pads as required.
- B. Restore site to pre-construction condition. Fill ruts, replace broken or damaged amenities, sod all disturbed areas.

1.28 PARKING

- A. Arrange for temporary parking areas to accommodate construction personnel on site. Do not block traffic.

1.29 PROGRESS CLEANING AND WASTE REMOVAL

- A. Collect and maintain work areas free of waste materials, debris, and rubbish on a daily basis. Maintain site in a clean and orderly condition. Provide refuse containers and dispose of construction debris legally off site. The Owner may request load tickets from landfills permitted to accept construction debris.

1.30 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities and materials, prior to Substantial Completion review.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

1.31 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work.

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1.32 TRANSPORTATION, HANDLING, STORAGE AND PROTECTION

- A. Transport, handle, store, and protect Products in accordance with manufacturers' instructions.

1.33 PRODUCT OPTIONS

- A. Products Specified by Naming One Manufacturer or equal: The specific product of manufacturer named is approved as "Basis of Design". Equal alternate products shall be submitted for review and must be approved by Owner as Substitutions prior inclusion in the project. Submit product data as required in SUBSTITUTIONS.

1.34 SUBSTITUTIONS

- A. Architect/Engineer will consider requests for Substitutions only within 10 days after date established in Notice to Proceed. For Pre-Bid approved Substitutions, submit request 9 calendar days or more before bid date with all back up data to show that all characteristics of the Basis of Design product are met with the substituted product or material.
- B. Document each request with complete backup data substantiating compliance of proposed Substitution with all characteristics of the materials specified in the Contract Documents.
- C. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
- D. Substitution shall indicate all product properties and show that they are equal to that Specified.
- E. Acceptance or Rejection of Pre-Bid Substitution Requests will be issued by Addendum.

1.35 FINAL CLEANING

- A. Execute final cleaning prior to final inspection of work area. User may occupy portions of the work incrementally as the work is completed and accepted. Entire project to be ready for use by User once all areas of work are completed.
- B. Clean debris from site and drainage systems.
- C. Remove waste and surplus materials, rubbish, and construction facilities from the facility and the site. Leave site in raked and smooth condition.

1.36 PROJECT RECORD DOCUMENTS

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- A. Maintain on site one set of Contract Documents to be utilized only for record documents.
- B. Record actual revisions to the Work. Record information concurrent with construction progress.
- C. Specifications: Legibly mark and record at each Product section a description of actual Products installed.
- D. Record Documents and Shop Drawings: Legibly mark each item to record actual construction.
- E. Submit documents to Architect with claim for final Application for Payment.
- F. Submit 2 paper copies and 1 disc with pdf copies to include:
 - a. As built drawings and specifications
 - b. Approved submittals
 - c. Warrantees and guarantees
 - d. Certificate of Occupancy or Letter of Completion from Permitting Department or other agencies, as applicable.

1.37 WARRANTIES

- A. Product and Manufacturer's Warranties shall be provided per specifications.
- B. In addition, all materials and labor shall be warranted for a minimum of one year after Substantial Completion of the entire project. Contractor to promptly repair all deficiencies within that time. A warranty inspection shall be scheduled by the Owner, with the Contractor and Owner's representative, before the end of the warranty period, in order to review the work and note deficiencies for the Contractor to correct. Said meeting may be waived if no deficiencies are noted.

PART 2 PRODUCTS
Not Used.

PART 3 EXECUTION
Not Used.

END OF SECTION

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Allowances will be utilized to:
 - 1. Defer selection of certain items until more information is available.
 - 2. Provide for discretionary installation of materials where exact and specific conditions cannot be determined in advance.
 - 3. Provide for the discretionary use of labor where tasks and time frames cannot be determined in advance.
- B. Include in Total Bid a stipulated lump sum allowance amount as specified in this Section.

1.3 ALLOWANCE

- A. Include in Total Bid a stipulated lump sum as indicated for use upon Owner's instruction.
- B. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from this Allowance.
- C. At closeout of Contract, funds remaining in Allowance will be credited to Owner by Change Order.

1.4 SELECTION AND PURCHASE

- A. Advise the Architect when final selection and purchase of allowance item must be complete to avoid delay.

1.5 SUBMITTALS

- A. Submit invoices to show quantity delivered to the site for each allowance.

PART 2 PRODUCTS

Not Used

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PART 3 EXECUTION

3.1 INSPECTION

- A. Promptly inspect all Allowance items upon delivery. Immediately report any shortage, damage, or defects to Architect.

3.2 PREPARATION

- A. Coordinate materials and installation to assure that each item is integrated with related construction activities.

3.3 ALLOWANCE SCHEDULE

- A. Figures Park Include as a Contingency Allowance the lump sum amount of Fifteen Thousand Dollars and No Cents (\$15,000)
- B. Trinity Gardens Park Include as a Contingency Allowance the lump sum amount of Fifteen Thousand Dollars and No Cents (\$20,000)

END OF SECTION 012100

SECTION 01220

UNIT PRICES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
1. Measurement.
 2. Payment.

1.3 UNIT PRICES

- A. Provide unit prices for items listed, for inclusion in Contract, guaranteed to apply for duration of Project as basis for additions to or deductions from Contract Sum.
- B. Actual quantities and measurements supplied or placed in the Work will determine payment.
- C. Payment includes full compensation for all required labor, Products, tools, equipment, services, and incidentals, and for erection, application, or installation of an item of the Work.

PART 2 PRODUCTS Not used

PART 3 EXECUTION

3.1 UNIT PRICE SCHEDULE – **FIGURES PARK**

- 1) Provide and install Silt Fence Type A. Includes installation, removal, and all other necessary construction components for installation.
 - (a) Unit of measure: Linear Feet - LF
 - (b) Basis of payment:
 - (i) Contract Sum to be based on quantities material provided and installed.
 - (ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

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- 2) Provide and install 4" concrete flatwork curb (sidewalks, etc) per detail. Include excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation
 - (a) Unit of measure: Square Feet - SF
 - (b) Basis of payment:
 - (i) Contract Sum to be based on quantities material provided and installed.
 - (ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

- 3) Provide and install solid sod, Bermuda. Include grading, placement, and all other necessary construction components for installation.
 - (a) Unit of measure: Square Yard - SY
 - (b) Basis of payment:
 - (i) Contract Sum to be based on quantities material provided and installed.
 - (ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

- 4) Provide and install batting cage as specified. Include all materials and hardware, mounting, netting, excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation
 - (a) Unit of measure: Each - EA
 - (b) Basis of payment:
 - (i) Contract Sum to be based on quantities material provided and installed.
 - (ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

- 5) Provide and install baseball foul poles as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation
 - (a) Unit of measure: Each - EA
 - (b) Basis of payment:
 - (i) Contract Sum to be based on quantities material provided and installed.
 - (ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

- 6) Provide and install turf rotor as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation
 - (a) Unit of measure: Each - EA
 - (b) Basis of payment:
 - (i) Contract Sum to be based on quantities material provided and installed.
 - (ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

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- 7) Provide and install irrigation control valve as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation
(a) Unit of measure: Each - EA
(b) Basis of payment:
(i) Contract Sum to be based on quantities material provided and installed.
(ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.
- 8) Provide and install irrigation mainline as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation
(a) Unit of measure: Linear Feet - LF
(b) Basis of payment:
(i) Contract Sum to be based on quantities material provided and installed.
(ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

3.2 UNIT PRICE SCHEDULE – TRINITY GARDENS PARK

- 9) Provide and Install on-site placement and compaction of soil (Cut/Fill), includes excavating or filling. Cut material will be placed elsewhere on-site or hauled off as required. Fill material will be from material onsite, and all other necessary construction components for installation.
(a) Unit of measure: Cubic Yards - CY.
(b) Basis of payment:
(i) Contract Sum to be based on quantities material provided and installed.
(ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.
- 10) Unsuitable Soil Material – Cubic Yards In Place, includes excavation, haul off and disposal of unsuitable material.
(a) Unit of measure: Cubic Yards In Place - CYIP.
(b) Basis of payment:
(i) Contract Sum to be based on quantities material provided and installed.
(ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.
- 11) Structural Fill – Cubic Yards In Place, Provide and Install Imported Structural Fill, spread, compaction, and all other necessary construction components for installation.
(a) Unit of measure: Cubic Yards In Place - CYIP.
(b) Basis of payment:

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- (i) Contract Sum to be based on quantities material provided and installed.
 - (ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

- 12) Provide and install Silt Fence Type A. Includes installation, removal, and all other necessary construction components for installation.
 - (a) Unit of measure: Linear Feet - LF
 - (b) Basis of payment:
 - (i) Contract Sum to be based on quantities material provided and installed.
 - (ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

- 13) Provide and install inlet protection. Includes installation, removal, and all other necessary construction components for installation.
 - (a) Unit of measure: Each - EA
 - (b) Basis of payment:
 - (i) Contract Sum to be based on quantities material provided and installed.
 - (ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

- 14) Provide and install wattles. Includes installation, removal, and all other necessary construction components for installation.
 - (a) Unit of measure: Linear Feet - LF
 - (b) Basis of payment:
 - (i) Contract Sum to be based on quantities material provided and installed.
 - (ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

- 15) Provide and install 12" HDPE drain pipe. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.
 - (a) Unit of measure: Linear Feet - LF
 - (b) Basis of payment:
 - (i) Contract Sum to be based on quantities material provided and installed.
 - (ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

- 16) Provide and Install 0'-4' Drop Inlet. Include excavation, fill, compaction, grading, disposal, placement, and all other necessary construction components for installation.
 - (a) Unit of measure: Each - EA
 - (b) Basis of payment:
 - (i) Contract Sum to be based on quantities material provided and installed.
 - (ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

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- 17) Provide and install 6' Vinyl Chain Link Fence as specified. Include excavation, fill, compaction, grading, disposal, placement, footings, and all other necessary construction components for installation.
(a) Unit of measure: Linear Feet - LF
(b) Basis of payment:
(i) Contract Sum to be based on quantities material provided and installed.
(ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.
- 18) Provide and install solid sod, Bermuda. Include grading, placement, and all other necessary construction components for installation.
(a) Unit of measure: Square Yard - SY
(b) Basis of payment:
(i) Contract Sum to be based on quantities material provided and installed.
(ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.
- 19) Provide and install batting cage as specified. Include all materials and hardware, mounting, netting, excavation, fill, compaction, grading, concrete, reinforcement, disposal, placement, and all other necessary construction components for installation
(a) Unit of measure: Each - EA
(b) Basis of payment:
(i) Contract Sum to be based on quantities material provided and installed.
(ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.
- 20) Provide and install baseball foul poles as specified. Include excavation, fill, compaction, grading, concrete, engineering, reinforcement, disposal, placement, and all other necessary construction components for installation
(a) Unit of measure: Each - EA
(b) Basis of payment:
(i) Contract Sum to be based on quantities material provided and installed.
(ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.
- 21) Provide and install yellow Saf-Top fence guard and all other necessary construction components for installation.
(a) Unit of measure: Linear Foot - LF
(b) Basis of payment:
(i) Contract Sum to be based on quantities material provided and installed.
(ii) Adjustments to Contract Sum will be made based on actual quantity of items provided to owner.

END OF SECTION

SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General project coordination procedures.
 - 2. Administrative and supervisory personnel.
 - 3. Coordination drawings.
 - 4. Requests for Information (RFIs).
 - 5. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Sections:
 - 1. Division 1 Section "Execution Requirements"
 - 2. Division 1 Section "Project Record Drawings" for coordinating closeout of the Contract.

1.3 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information from each other during construction.

1.4 COORDINATION

- A. Contractor shall be responsible for coordinating all trades of his contract, Owners Contractors, coordinating construction sequences and schedules, and coordinating actual installed location and interface of work.
- B. Contractor shall supervise and direct the development of coordination drawings showing comprehensive coordination and integration of all Work of this project

including, but not limited to, structural, architectural mechanical, plumbing, fire protection, electrical disciplines, and Owners Contractors.

- C. Coordination drawings are intended to assist Contractor and all trades during construction and may be used to supplement shop drawings, record drawings, and other required submittals.
- D. Coordination: Each contractor shall supervise and direct construction operations with those of subcontractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- E. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- F. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's construction schedule.
 - 2. Preparation of the schedule of values.
 - 3. Installation and removal of temporary facilities and controls.
 - 4. Delivery and processing of submittals.
 - 5. Progress meetings.
 - 6. Preinstallation conferences.
 - 7. Project closeout activities.
 - 8. Startup and adjustment of systems.
 - 9. Project closeout activities.

1.5 KEY PERSONNEL

- A. Key Personnel Names: Within 5 days of Notice to Proceed, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and email

addresses. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1. Post copies of list at site. Keep list current at all times.

1.6 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

1.7 PROJECT MEETINGS

- A. General: Attendance of subcontractors and superintendent at a weekly progress meeting is required.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01310

SECTION 01320

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's construction schedule.
 - 2. Field condition reports.
 - 3. Special reports.

1.3 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
 - 1. PDF electronic file.
- B. Start-up construction schedule.
 - 1. Approval of cost-loaded start-up construction schedule will not constitute approval of schedule of values for cost-loaded activities.
- C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
- D. Field Condition Reports: Submit at time of discovery of differing conditions.
- E. Special Reports: Submit at time of unusual event.
- F. Existing Condition Photos: Submit prior to onsite mobilization to record existing conditions. If, during construction, damage occurs by others, notify Project Manager right away.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of final completion.

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- B. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Show the following:
1. Activity Duration
 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 3. Submittal Review Time: Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
 4. Startup and Testing Time: Include not less than 15 days for startup and testing.
 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.
 2. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.
 - e. Use of premises restrictions.
 - f. Provisions for future construction.
 - g. Seasonal variations.
 - h. Environmental control.
- D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.

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- E. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
 - 1. Unresolved issues.
 - 2. Unanswered RFIs.
 - 3. Rejected or unreturned submittals.
 - 4. Notations on returned submittals.

2.2 REPORTS

- A. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.3 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

Not Used

END OF SECTION

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
 - 1. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
 - 2. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 3. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 4. Format: Arrange the following information in a tabular format:
 - a. Specification Section number and title.
 - b. Submittal category: Action; informational.
 - c. Name of subcontractor.
 - d. Description of the Work covered.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.
1. Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings and Project record drawings.
 - a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
 - b. Digital Drawing Software Program: The Contract Drawings are available in .DWG format.
 - c. Contractor shall execute a data licensing agreement in the form of AIA Document C106, Digital Data Licensing Agreement.
 - d. Upon request and at the approval of architect and owner.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

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2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 10 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 10 days for review of each resubmittal.
 4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 15 days for initial review of each submittal.
- D. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).
 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
 4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Owner.
 - e. Name of Contractor.
 - f. Names of subcontractor, manufacturer, and supplier.
 - g. Category and type of submittal.

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- h. Submittal purpose and description.
 - i. Specification Section number and title.
 - j. Specification paragraph number or drawing designation and generic name for each of multiple items.
 - k. Drawing number and detail references, as appropriate.
 - l. Related physical samples submitted directly.
 - m. Indication of full or partial submittal.
 - n. Transmittal number, numbered consecutively.
 - o. Other necessary identification.
 - p. Remarks.
- E. Options: Identify options requiring selection by Architect.
- F. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
- 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
- 1. Submit electronic submittals via email as PDF electronic files.
 - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

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2. Action Submittals: Submit three paper copies of each submittal unless otherwise indicated. Architect will return two copies.
 3. Informational Submittals: Submit two paper copies of each submittal unless otherwise indicated. Architect will not return copies.
 4. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
 - b. Provide a notarized statement on original paper copy certificates and certifications where indicated.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts or color specified.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.
 6. Submit Product Data in the following format:
 - a. PDF electronic file.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Architect's digital data drawing files is otherwise permitted.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

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- a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches, but no larger than 30 by 42 inches.
 3. Submit Shop Drawings in the following format:
 - a. PDF electronic file.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 - e. Specification paragraph number and generic name of each item.
 3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
 4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit one full set of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and

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physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

- a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record sample.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 2. Manufacturer and product name, and model number if applicable.
 3. Number and name of room or space.
 4. Location within room or space.
 5. Submit product schedule in the following format:
 - a. PDF electronic file.
- F. Coordination Drawing Submittals: Comply with requirements specified in Section 013100 "Project Management and Coordination."
- G. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."
- H. Application for Payment and Schedule of Values: Comply with requirements specified in Section 012900 "Payment Procedures."
- I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."
- J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."
- K. Maintenance Data: Comply with requirements specified in Section 017823 "Operation and Maintenance Data."

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- L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- N. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- O. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- P. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- Q. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- R. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- S. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- T. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- U. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- V. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 017700 "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may be returned by the Architect without action.

END OF SECTION 013300

SECTION 01600 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
 - 1. Section 012101 "Allowances" for products selected under an allowance.
 - 2. Section 01710 "Closeout Procedures" for submitting warranties.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products, unless indicated otherwise.
 - 3. Comparable Product: Product by named manufacturer that is demonstrated and approved through the comparable product submittal process described in Part 2 "Comparable Products" Article, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.
 - 1. Evaluation of Comparable Products: In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant

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qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification. Manufacturer's published attributes and characteristics of basis-of-design product also establish salient characteristics of products for purposes of evaluating comparable products.

- C. Comparable Product Request Submittal: An action submittal requesting consideration of a comparable product, including the following information:
 - 1. Identification of basis-of-design product or fabrication or installation method to be replaced, including Specification Section number and title and Drawing numbers and titles.
 - 2. Data indicating compliance with the requirements specified in Part 2 "Comparable Products" Article.
- D. Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Section 013300 "Submittal Procedures."
- E. Substitution: Refer to Section 012600 "Procurement Substitution Procedures" for definition and limitations on substitutions.

1.4 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
 - 1. Resolution of Compatibility Disputes between Multiple Contractors:
 - a. Contractors are responsible for providing products and construction methods compatible with products and construction methods of other contractors.
 - b. If a dispute arises between the multiple contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.
- B. Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.
 - 1. Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is not conspicuous.

1.5 COORDINATION

- A. Modify or adjust affected work as necessary to integrate work of approved comparable products and approved substitutions.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products, using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to determine compliance with the Contract Documents and that products are undamaged and properly protected.
- C. Storage:
 - 1. Provide a secure location and enclosure at Project site for storage of materials and equipment.
 - 2. Store products to allow for inspection and measurement of quantity or counting of units.
 - 3. Store materials in a manner that will not endanger Project structure.
 - 4. Store products that are subject to damage by the elements under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation and with adequate protection from wind.
 - 5. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 - 6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - 7. Protect stored products from damage and liquids from freezing.
 - 8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1. Manufacturer's Warranty: Written standard warranty form furnished by individual manufacturer for a particular product and issued in the name of the Owner or endorsed by manufacturer to Owner.
 - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner and issued in the name of the Owner or endorsed by manufacturer to Owner.

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- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: When specified forms are included in the Project Manual, prepare a written document, using indicated form properly executed.
 - 3. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
 - 4. Where products are accompanied by the term "as selected," Architect will make selection.
 - 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
 - 6. Or Equal: For products specified by name and accompanied by the term "or equal," "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
 - a. Submit additional documentation required by Architect, through Project Manager in order to establish equivalency of proposed products. Unless otherwise indicated, evaluation of "or equal" product status is by the Owner, whose determination is final.
 - 7. For approval of products **Prior to Bid** by unnamed manufacturers, comply with requirements in Section 002600 "Procurement Substitution Procedures" for substitutions for convenience.
 - 8. No approvals for convenience will be accepted after bid date.
- B. Product Selection Procedures:
 - 1. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or

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indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications may additionally indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

- a. For approval of products **Prior to Bid** by unnamed manufacturers, comply with requirements in Section 002600 "Procurement Substitution Procedures" for substitutions for convenience.
- b. No approvals for convenience will be accepted after bid date.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with the following requirements:
 1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those of the named basis-of-design product. Significant product qualities include attributes, such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.
- B. Architect's Action on Comparable Products Submittal: If necessary, Architect will request additional information or documentation for evaluation, as specified in Section 013300 "Submittal Procedures."
 1. Form of Approval of Submittal: As specified in Section 013300 "Submittal Procedures."
 2. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- C. Submittal Requirements, Two-Step Process: Approval by the Architect of Contractor's request for use of comparable product is not intended to satisfy other submittal requirements. Comply with specified submittal requirements.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 01700
EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

- 1. Environmental concerns.
- 2. Installation of the Work.
- 3. Cutting and patching.
- 4. Progress cleaning.
- 5. Starting and adjusting.
- 6. Protection of installed construction.
- 7. Correction of the Work.

- B. Related Sections:

- 1. Division 1 Sections "Summary of the Work", "Project Record Documents", or "Closeout Procedures", if included in Project Manual, for submitting closeout documents and final cleaning.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.4 INFORMATIONAL SUBMITTALS

- A. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:
 - 1. Extent: Describe reason for and extent of each occurrence of cutting and patching.

2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
3. Products: List products to be used for patching and firms or entities that will perform patching work.
4. Dates: Indicate when cutting and patching will be performed.
5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate how long services and systems will be disrupted. Prior approval of Utility outages is required. Notify Owner of intent at least 72 hours in advance.

1.5 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to the Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to Architect according to requirements in Division 1 Section "Project Management and Coordination."
- D. Surface and Substrate Preparation: Comply with manufacturer's recommendations for preparation of substrates to receive subsequent work.

3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

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1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 4. Maintain minimum headroom clearance of 96 inches, but in no case shall the new piping be lower than the existing piping.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 2. Allow for building movement, including thermal expansion and contraction.
 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous, and meet environmental requirements.

3.4 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Temporary Support: Provide temporary support of work to be cut.
- C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- D. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements of Division 1 Section "Summary."
- E. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- F. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 5. Proceed with patching after construction operations requiring cutting are complete.
- G. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.

2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- H. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.5 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Utilize containers intended for holding waste materials of type to be stored.
 4. Coordinate progress cleaning for joint-use areas where more than one installer has worked.
- B. Site: Maintain Project site free of waste materials and debris.

- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- F. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.
- G. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- H. Clean completed construction as frequently as necessary through the remainder of the construction period.

3.6 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in other Division 2 -16 Sections."
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- E. Manufacturer's Field Service: Comply with qualification requirements in other Division 2-16 Sections.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.8 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

3.9 ENVIRONMENTAL CONCERNS

- 1. Provide protection and conduct construction in ways that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

3.10 STORMWATER CONTROL AND DISCHARGE

- 1. Comply with City of Mobile and Alabama Department of Environmental Management requirements. Pay particular attention to Water Regulations and Allowable Discharges.
- 2. See City of Mobile Code, Chapter 17, Storm Water Management and Flood Control.
- 3. Obtain any necessary permits that may be required due to discharges.

END OF SECTION 01700

SECTION 01710
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of cleaning agent.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at final completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.

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- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect's signature for receipt of submittals.
 5. Submit testing, adjusting, and balancing records.
 6. Submit sustainable design submittals not previously submitted.
 7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 3. Complete startup and testing of systems and equipment.
 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

6. Advise Owner of changeover in utility services.
7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
8. Complete final cleaning requirements.
9. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

1.7 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
2. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
3. Submit final completion photographic documentation.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 - 1. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 - 2. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.
 - 3. Submit list of incomplete items in the following format:
 - a. MS Excel electronic file. Architect will return annotated file.
 - b. PDF electronic file. Architect will return annotated file.

1.9 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- C. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- D. Warranties in Paper Form:
 - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed

description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.

3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- E. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, and grounds, in areas disturbed by construction and delivery activities, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - d. Clean interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

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- e. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- f. Sweep concrete floors broom clean in unoccupied spaces.
- g. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
- h. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
- i. Remove labels that are not permanent.
- j. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
- k. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
- l. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
- m. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
- n. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
- o. Leave Project clean and ready for occupancy.

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair, or remove and replace, defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.

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2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION

SECTION 017823
OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation manuals for systems, subsystems, and equipment.
 - 2. Maintenance manuals for the care and maintenance of products, materials, and finishes, systems and equipment.
- B. See Divisions 01 through 16 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.2 SUBMITTALS

- A. Manual: Submit two copies of each manual in final form at least 15 days before final inspection. Architect will return copy with comments within 10 days after final inspection.
 - 1. Correct or modify each manual to comply with Architect's comments. Submit **2** copies of each corrected manual within 10 days of receipt of Architect's comments.
 - 2. Provide PDF copies on 2 discs. Submit with the corrected manual.

PART 2 - PRODUCTS

2.1 MANUALS, GENERAL

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain a title page, table of contents, and manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Name and address of Owner.
 - 4. Date of submittal.
 - 5. Name, address, and telephone number of Contractor.

6. Name and address of Architect and Engineer.
 7. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
 4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.2 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and equipment descriptions, operating standards, operating procedures, operating logs, wiring and control diagrams, and license requirements.
- B. Descriptions: Include the following:
1. Product name and model number.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.

4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include start-up, break-in, and control procedures; stopping and normal shutdown instructions; routine, normal, seasonal, and weekend operating instructions; and required sequences for electric or electronic systems.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.3 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
1. Product name and model number.
 2. Manufacturer's name.
 3. Color, pattern, and texture.
 4. Material and chemical composition.
 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and inspection procedures, types of cleaning agents, methods of cleaning, schedule for cleaning and maintenance, and repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

2.4 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including maintenance instructions, drawings and diagrams for maintenance, nomenclature of parts and components, and recommended spare parts for each component part or piece of equipment:
- D. Maintenance Procedures: Include test and inspection instructions, troubleshooting guide, disassembly instructions, and adjusting instructions, and demonstration and training videotape if available, that detail essential maintenance procedures.
- E. Submit demonstration and training video for all lighting control systems.
- F. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
- G. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- H. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- I. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

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- B. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
- C. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
- D. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.
 - 1. Do not use original Project Record Documents as part of operation and maintenance manuals.
- E. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

SECTION 017839
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. See Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
- C. See Divisions 01 through 16 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.2 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit copies of Record Drawings as follows:
 - a. Final Submittal: Submit two sets of marked-up Record Prints, showing all dimensional locations, materials changes, any changes via addendum or change order. Pay particular attention to noting underground utilities.
- B. Record Specifications: Submit two copies of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit two copies of each Product Data submittal.
- D. Submit PDF's of Record Drawings, Record Specifications, Record Change Orders, Requests for Proposal, Documentation of use of Allowances, Product and Contractor's Warrantees, Product Test Reports, Final Surveys, Record Product Data, etc on 2 discs.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.

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1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 2. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
 3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 4. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Record Transparencies: Organize into unbound sets matching Record Prints. Place transparencies in durable tube-type drawing containers with end caps. Mark end cap of each container with identification. If container does not include a complete set, identify Drawings included.
 3. Record CAD Drawings: Organize CAD information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each CAD file.
 4. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect and Engineer.
 - e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- B. Completed Test Reports.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

END OF SECTION 017839

SECTION 02230 - SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Removing existing vegetation.
 - 2. Clearing and grubbing.
 - 3. Stripping and stockpiling topsoil.
 - 4. Removing above- and below-grade site improvements.
 - 5. Disconnecting, capping or sealing, and removing site utilities.
 - 6. Temporary erosion- and sedimentation-control measures.

1.3 DEFINITIONS

- A. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- B. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.
- D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 MATERIAL OWNERSHIP

- A. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 INFORMATIONAL SUBMITTALS

- A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
 - 1. Use sufficiently detailed photographs or videotape.
- B. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE

- A. Preinstallation Conference: Conduct conference at Project site.

1.7 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Utility Locator Service: Notify One Call for area where Project is located before site clearing.
- C. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.
- D. Soil Stripping, Handling, and Stockpiling: Perform only when the topsoil is dry or slightly moist.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 02300 "Earthwork."
 - 1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.
- B. Antirust Coating: Fast-curing, lead- and chromate-free, self-curing, universal modified-alkyd primer complying with MPI #79, Alkyd Anticorrosive Metal Primer or SSPC-Paint 20 or SSPC-Paint 29 zinc-rich coating.

1. Use coating with a VOC content of 420 g/L (3.5 lb/gal.) or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Protect existing site improvements to remain from damage during construction.
 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion and sedimentation control Drawings and requirements of authorities having jurisdiction.
- B. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 EXISTING UTILITIES

- A. Locate, identify, utilities in the construction area. Notify the Engineer immediately on any discrepancies and conflicts.

3.4 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 2. Grind down stumps and remove roots, obstructions, and debris to a depth of 18 inches below exposed subgrade.
 3. Remove tree branches and dispose of off-site.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density equal to adjacent original ground.

3.5 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil in a manner to prevent intermingling with underlying subsoil or other waste materials.
 1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects more than 2 inches in diameter; trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
 1. Limit height of topsoil stockpiles to 72 inches.
 2. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity required for landscaped areas.

3.6 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.
 2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 02230

SECTION 02300 - EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Preparing subgrades for slabs-on-grade, walks, pavements, turf and grasses, and plants.
2. Excavating and backfilling for buildings and structures.
3. Subbase course for concrete walks and pavements.
4. Subbase course and base course for asphalt paving.
5. Subsurface drainage backfill for walls and trenches.
6. Excavating and backfilling trenches for utilities and pits for buried utility structures.
7. Excavating well hole to accommodate elevator-cylinder assembly.
8. Preparing and grading for synthetic playing field areas sub-grade.

- B. Related Sections:

1. Section 02230 "Site Clearing" for site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements and utilities.

1.3 UNIT PRICES

- A. Refer to Section 01270 "Unit Prices" for a list of Unit Prices for work in addition to the contract documents.

1.4 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

- B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.

- C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
 - 2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
 - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.
- F. Fill: Soil materials used to raise existing grades.
- G. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- H. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- I. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
- J. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of the following manufactured products required:
 - 1. Geotextiles.
 - 2. Controlled low-strength material, including design mixture.
 - 3. Warning tapes.
- B. Samples for Verification: For the following products, in sizes indicated below:
 - 1. Geotextile: 12 by 12 inches.
 - 2. Warning Tape: 12 inches long; of each color.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified testing agency.
- B. Material Test Reports: For each on-site and borrow soil material proposed for fill and backfill as follows:

1. Classification according to ASTM D 2487.
 2. Laboratory compaction curve according to ASTM D 698.
- C. Preexcavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by earth moving operations. Submit before earth moving begins.
- D. Quality assurance verification of the sub-grade prior to sub-base materials installation, should include the following:
1. Conformance Survey of Sub-Grade: The Contractor shall perform a conformance survey by a licensed surveyor, before any placement of the drainage stone, on a 25-foot grid over the sub-grade of the entire playing field. Owner's Representative will require three (3) working days to review survey. After review, the survey will be returned to Contractor with areas out of tolerance noted for correction. Contractor will be required to correct areas out of tolerance and certify that corrections have been made prior to base drainage stone.
 2. Tolerance for Sub-Grade: Sub-grade shall be verified using laser-operation survey instruments. Subgrade must be within 1/4 of an inch plus or minus from the elevations shown on the plans. In addition, the sub-grade shall be measured so that no point within the 25-foot grid deviates more than 1/4 of an inch from any other point within the 25-foot grid.

1.7 QUALITY ASSURANCE

- A. Preexcavation Conference: Conduct conference at Project site.

1.8 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Utility Locator Service: Notify "One Call" for area where Project is located before beginning earth moving operations.
- C. Do not commence earth moving operations until temporary erosion- and sedimentation-control measures, specified in Section 02230 "Site Clearing," are in place.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: As defined within the geotechnical report.
- C. Unsatisfactory Soils: As defined within the geotechnical report.
 - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Subbase Material: ALDOT Section 230 Modified Roadbed.
- E. Base Course: ALDOT Section 825 Crushed Aggregate Base – Type A or B.
- F. Structural Fill: As defined within the geotechnical report.
- G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.
- H. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch sieve and 0 to 5 percent passing a No. 4 sieve.
- I. Sand: ASTM C 33; fine aggregate.
- J. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

2.2 GEOTEXTILES

- A. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
 - 1. Survivability: Class 2; AASHTO M 288.
 - 2. Grab Tensile Strength: 157 lbf; ASTM D 4632.
 - 3. Sewn Seam Strength: 142 lbf; ASTM D 4632.
 - 4. Tear Strength: 56 lbf; ASTM D 4533.
 - 5. Puncture Strength: 56 lbf; ASTM D 4833.
 - 6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
 - 7. Permittivity: 0.2 per second, minimum; ASTM D 4491.
 - 8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

- B. Separation Geotextile: Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Survivability: Class 2; AASHTO M 288.
 2. Grab Tensile Strength: 247 lbf; ASTM D 4632.
 3. Sewn Seam Strength: 222 lbf; ASTM D 4632.
 4. Tear Strength: 90 lbf; ASTM D 4533.
 5. Puncture Strength: 90 lbf; ASTM D 4833.
 6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
 7. Permittivity: 0.02 per second, minimum; ASTM D 4491.
 8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

2.3 CONTROLLED LOW-STRENGTH MATERIAL

- A. Controlled Low-Strength Material: Self-compacting, flowable concrete material produced from the following:
1. Portland Cement: ASTM C 150, Type I.
 2. Fly Ash: ASTM C 618, Class C or F.
 3. Normal-Weight Aggregate: ASTM C 33, 3/4-inch nominal maximum aggregate size.
 4. Water: ASTM C 94.
 5. Air-Entraining Admixture: ASTM C 260.
- B. Produce conventional-weight, controlled low-strength material with 80-psi compressive strength when tested according to ASTM C 495.

2.4 GEOFOAM (Not Used)

2.5 ACCESSORIES

- A. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
1. Red: Electric.
 2. Yellow: Gas, oil, steam, and dangerous materials.
 3. Orange: Telephone and other communications.
 4. Blue: Water systems.
 5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXPLOSIVES

- A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.

3.5 EXCAVATION FOR SYNTHETIC PLAYING FIELDS

- A. Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1/4 inch over 25 feet. Do not disturb bottom of excavations intended for bearing surface. Grades shall be uniformly sloped as indicated on the plans. A conformance survey will be required prior to acceptance and further work being authorized to proceed.

3.6 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
 - 1. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch. Do not disturb bottom of excavations intended as bearing surfaces.

3.7 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.8 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
 - 1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.
 - 1. Clearance: As indicated.
- C. Trench Bottoms: Excavate trenches 6 inches deeper than bottom of pipe and conduit elevations to allow for bedding course. Hand-excavate deeper for bells of pipe.
 - 1. Excavate trenches deeper per geotechnical engineer's recommendation in areas of rock or other unyielding bearing material to allow for bedding course.

3.9 EXCAVATION FOR ELEVATOR CYLINDER (Not Used)

3.10 SUBGRADE INSPECTION

- A. Notify Engineer when excavations have reached required subgrade.
- B. If Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade below pavements with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
 2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed.
- D. Refer to Section 334600 Synthetic Turf Base Construction for additional requirements for approval of sub-grade.
- E. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
- F. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

3.11 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 1500 psi, may be used when approved by Engineer.
1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Engineer.

3.12 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.13 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
 2. Surveying locations of underground utilities for Record Documents.
 3. Testing and inspecting underground utilities.
 4. Removing concrete formwork.
 5. Removing trash and debris.
 6. Removing temporary shoring and bracing, and sheeting.
 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.14 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Trenches under Footings: Backfill trenches excavated under footings and within 18 inches of bottom of footings with structural fill; fill with concrete to elevation of bottom of footings. Concrete is specified in Section 03300 "Cast-in-Place Concrete".
- D. Backfill voids with structural soil while removing shoring and bracing.
- E. Place and compact initial backfill of structural fill, free of particles larger than 1 inch in any dimension, to a height of 12 inches over the pipe or conduit.
 - 1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- F. Place and compact final backfill of structural fill to final subgrade elevation.
- G. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.15 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
 - 1. Under grass and planted areas, use satisfactory soil material.
 - 2. Under walks and pavements, use structural fill.
 - 3. Utility Trenches under pavements or buildings, use structural fill.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.16 GEOFOAM FILL (Not Used)

3.17 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.

2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.18 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 10 inches in loose depth for material compacted by heavy compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of the Modified Proctor maximum dry density according to ASTM D 1557:
 1. Under structures and pavements: 95 percent. The top 12 inches of fill beneath the building pad and flexible pavement areas should be compacted to 98 percent.
 2. Under turf or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 percent.
 3. For utility trenches, compact each layer of initial and final backfill soil material at 95 percent. Beneath pavement areas, the top 12 inches of backfill should be compacted to at least 98 percent.
 4. Under Synthetic Playing Field areas: compact the top 6 inches below sub-grade and each layer of backfill or fill material at 95 percent maximum dry density OR as set forth by the Synthetic Turf Surface manufacturer.

3.19 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 1. Provide a smooth transition between adjacent existing grades and new grades.
 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 1. Turf or Unpaved Areas: Plus or minus 1 inch.
 2. Walks: Plus or minus 1 inch.
 3. Pavements: Plus or minus 1/2 inch.

3.20 SUBSURFACE DRAINAGE

- A. Subdrainage Pipe: Specified in Section 02630 "Storm Drainage."

- B. Subsurface Drain: Place subsurface drainage geotextile around perimeter of subdrainage trench. Place a 4-inch (100-mm) course of filter material on subsurface drainage geotextile to support subdrainage pipe. Encase subdrainage pipe in a minimum of 14 inches (350 mm) of filter material, placed in compacted layers 6 inches (150 mm) thick, and wrap in subsurface drainage geotextile, overlapping sides and ends at least 6 inches (150 mm).
 - 1. Compact each filter material layer with a minimum of two passes of a plate-type vibratory compactor.

3.21 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

- A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:
 - 1. Place base course material over subbase course under hot-mix asphalt pavement.
 - 2. Shape subbase course and base course to required crown elevations and cross-slope grades.
 - 3. Place subbase course and base course 6 inches or less in compacted thickness in a single layer.
 - 4. Place subbase course and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
 - 5. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 98 and 100 percent of maximum dry unit weight according to ASTM D 698 respectfully.

3.22 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE (Not Used)

3.23 FIELD QUALITY CONTROL

- A. Testing Agency: Contractor will engage a qualified geotechnical engineering testing agency to perform tests and inspections.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
- C. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
 - 1. Pavement Areas: One density test every 500 linear feet per lift for roadway sections or 10,000 square feet per lift for parking lots or two tests per lift, whichever is greater.
 - 2. Trench Backfill: One density test every 75 linear feet per lift or two tests per lift, whichever is greater.
 - 3. Synthetic Playing Field Areas: At sub-grade and at each compacted fill and backfill layer, perform at least one field in-place density test for every 10,000 sq. ft. or less of

playing field, but in no case fewer than three tests, per layer and per day of fill/backfill placement.

- D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.24 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.25 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 02300

SECTION 024100 - SITE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUBMITTALS

- A. The procedure proposed for the accomplishment of salvage and demolition work shall be submitted for approval. The procedure shall provide for safe conduct of the work, careful removal and disposition of materials specified to be salvaged, protection of property, which is to remain undisturbed, coordination with other work in progress. The procedure shall include a description of the method and equipment to be used for the operation, and the sequence of the operation.

1.3 GENERAL REQUIREMENTS

- A. The work includes demolition or removal of construction indicated on the drawings including but not limited to infield materials and existing grass outfields.
- B. The assumed method of demolition of the turf areas is herbicide treatment and tilling of existing grass. Herbicide shall be used per manufacturer's recommendations and per all environmental regulations. Sufficient time shall lapse after applying herbicide to allow visual evidence the application has eradicated all existing vegetation. Herbicide shall be reapplied if green and living vegetation remains. **If the Contractor decides to demolish the turf area with a different method other than assumed above, the Contractor shall notify the Landscape Architect before any demolition work occurs.**
- C. All materials resulting from demolition work, except as indicated or specified otherwise, shall become the property of the Contractor at the option of the Owner and shall be removed from the limits of the Owner's property. Rubbish and debris shall be removed from the property daily unless otherwise directed so as to not allow accumulation thereof. Materials that cannot be removed daily shall be stored in areas specified by the Owner.

1.4 DUST CONTROL

- A. The amount of dust resulting from demolition shall be controlled to prevent the spread of dust and to avoid creation of a nuisance in the surrounding area. Use of water will only be permitted when it will not result in, or create, hazardous or objectionable conditions such as ice, flooding and pollution.

1.5 PROTECTION

- A. Protection of Existing Work: Before beginning any cutting or demolition work, the Contractor shall carefully survey the existing work and examine the drawings and specifications to determine the extent of the work. The Contractor shall take all necessary precautions to insure against damage to existing work to remain in place, and any damage to such work shall be repaired or replaced as approved by the Engineer at no additional cost to the Owner. The Contractor shall

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carefully coordinate the work of this section with all other work and construct and maintain shoring, bracing and supports, as required. The Contractor shall insure that structural elements are not overloaded and be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal, or demolition work performed under any part of this contract.

1.6 AVAILABILITY OF WORK AREAS

- A. The area in which demolition work is to be accomplished will be available in accordance with a mutually agreeable schedule to be determined by the Landscape Architect and the Contractor.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

3.1 DISPOSITION OF MATERIAL

- A. Title to Materials: Title to all materials and equipment to be demolished, unless otherwise shown, is vested in the Contractor upon receipt of notice to proceed. The Owner will not be responsible for the condition, loss or damage to such property after notice to proceed.
- B. Material for Contractor Salvage: Salvage materials shall be removed from the Owner's property before completion of the Contract. Material for salvage shall not be sold on the site.

3.2 CLEAN-UP

- A. Debris Control: Debris shall be removed and transported in a manner as to prevent spillage on streets or adjacent areas.
- B. Clean up of debris and sediment shall be performed daily at construction entrance and asphalt entry road.
- C. Regulations: Local regulations regarding hauling and disposal apply.

END OF SECTION 024100

SECTION 02751 - CEMENT CONCRETE PAVEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Curbs and gutters.
- 2. Walks.

- B. Related Sections:

- 1. Section 02764 "Pavement Joint Sealants" for joint sealants in expansion and contraction joints within concrete paving and in joints between concrete paving and asphalt paving or adjacent construction.

1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, and ground granulated blast-furnace slag.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

- B. Other Action Submittals:

- 1. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified ready-mix concrete manufacturer.

- B. Material Certificates: For the following, from manufacturer:

- 1. Cementitious materials.

2. Steel reinforcement and reinforcement accessories.
3. Admixtures.
4. Curing compounds.
5. Applied finish materials.
6. Epoxy adhesive.
7. Joint fillers.

C. Material Test Reports: For each of the following:

1. Aggregates. Include service-record data indicating absence of deleterious expansion of concrete due to alkali-aggregate reactivity.

D. Field quality-control reports.

1.6 QUALITY ASSURANCE

A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94 requirements for production facilities and equipment.

B. ACI Publications: Comply with ACI 301 unless otherwise indicated.

C. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to concrete paving, including but not limited to, the following:
 - a. Concrete mixture design.
 - b. Quality control of concrete materials and concrete paving construction practices.
2. Require representatives of each entity directly concerned with concrete paving to attend, including the following:
 - a. Contractor's superintendent.
 - b. Independent testing agency responsible for concrete design mixtures.
 - c. Concrete paving subcontractor.

1.7 PROJECT CONDITIONS

A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

PART 2 - PRODUCTS

2.1 FORMS

- A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.
 - 1. Use flexible or uniformly curved forms for curves with a radius of 100 feet or less. Do not use notched and bent forms.
- B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

2.2 STEEL REINFORCEMENT

- A. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from steel wire into flat sheets.
- B. Reinforcing Bars: ASTM A 615, Grade 60; deformed.
- C. Joint Dowel Bars: ASTM A 615, Grade 60 plain-steel bars. Cut bars true to length with ends square and free of burrs.
- D. Tie Bars: ASTM A 615, Grade 60, deformed.
- E. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified, and as follows:
 - 1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.

2.3 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of same type, brand, and source throughout Project:
 - 1. Portland Cement: ASTM C 150, gray portland cement Type I. Supplement with the following:
 - a. Fly Ash: ASTM C 618, Class C or Class F.
- B. Normal-Weight Aggregates: ASTM C 33, Class 4S, uniformly graded. Provide aggregates from a single source.
 - 1. Maximum Coarse-Aggregate Size: 3/4 inch nominal.

2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: Potable and complying with ASTM C 94.

D. Air-Entraining Admixture: ASTM C 260.

E. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.

1. Water-Reducing Admixture: ASTM C 494, Type A.

2.4 FIBER REINFORCEMENT

A. Synthetic Fiber: Monofilament or fibrillated polypropylene fibers engineered and designed for use in concrete paving, complying with ASTM C 1116/C 1116M, Type III, 1/2 to 1-1/2 inches (13 to 38 mm) long.

2.5 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. dry.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

D. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Anti-Hydro International, Inc.; A-H Curing Compound #2 DR WB.

b. ChemMasters; Safe-Cure Clear.

c. Conspec by Dayton Superior; [D.O.T. Resin Cure] [DSSCC Clear Resin Cure].

d. Dayton Superior Corporation; Day-Chem Rez Cure (J-11-W).

e. Edoco by Dayton Superior; [DSSCC Clear Resin Cure] [Resin Emulsion Cure V.O.C. (Type I)].

f. Euclid Chemical Company (The), an RPM company; Kurez W VOX.

g. Kaufman Products, Inc.; Thinfilm 420.

h. Lambert Corporation; AQUA KURE - CLEAR.

i. L&M Construction Chemicals, Inc.; L&M CURE R.

j. Meadows, W. R., Inc.; 1100-CLEAR SERIES.

k. Nox-Crete Products Group; Resin Cure E.

- l. SpecChem, LLC; PaveCure Rez.
- m. Symons by Dayton Superior; Resi-Chem Clear.
- n. Tamms Industries, Inc., Euclid Chemical Company (The); TAMMSCURE WB 30C.
- o. TK Products, Division of Sierra Corporation; [TK-2519 WB] [TK-2519 DC WB].
- p. Vexcon Chemicals Inc.; Certi-Vex Enviocure 100.

2.6 RELATED MATERIALS

- A. Joint Fillers: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork in preformed strips.
- B. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin capable of humid curing and bonding to damp surfaces; of class suitable for application temperature, of grade complying with requirements, and of the following types:
 1. Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

2.7 CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to ACI 301, for each type and strength of normal-weight concrete, and as determined by either laboratory trial mixtures or field experience.
 1. Use a qualified independent testing agency for preparing and reporting proposed concrete design mixtures for the trial batch method.
 2. When automatic machine placement is used, determine design mixtures and obtain laboratory test results that meet or exceed requirements.
- B. Proportion mixtures to provide normal-weight concrete with the following properties:
 1. Compressive Strength (28 Days): Curbs and Sidewalks – 3000 psi
 2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.45.
 3. Slump Limit: General Use - 4 inches, Curbs and Sidewalks – 2 inches. Tolerance of plus or minus 1 inch.
- C. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:
 1. Air Content: 3-1/2 percent plus or minus 1.5 percent for 3/4-inch nominal maximum aggregate size.
- D. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.
- E. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.

2.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94. Furnish batch certificates for each batch discharged and used in the Work.
 - 1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.
- B. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.
 - 1. Completely proof-roll subbase in one direction. Limit vehicle speed to 3 mph.
 - 2. Proof-roll with a pneumatic-tired and loaded, 10-wheel, tandem-axle dump truck weighing not less than 15 tons, with a maximum weight of 45 tons.
 - 3. Correct subbase with soft spots and areas of pumping or rutting exceeding depth of 1/2 inch according to requirements in Section 02300 "Earthwork."
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove loose material from compacted subbase surface immediately before placing concrete.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.4 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.

- C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
- D. Install welded wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.
- E. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2-inch overlap of adjacent mats.

3.5 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
 - 1. When joining existing paving, place transverse joints to align with previously placed joints unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
 - 1. Continue steel reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of paving strips unless otherwise indicated.
 - 2. Provide tie bars at sides of paving strips where indicated.
 - 3. Butt Joints: Use epoxy bonding agent at joint locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
 - 4. Keyed Joints: Provide preformed keyway-section forms or bulkhead forms with keys unless otherwise indicated. Embed keys at least 1-1/2 inches into concrete.
 - 5. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.
 - 1. Locate expansion joints at intervals of 50 feet unless otherwise indicated.
 - 2. Extend joint fillers full width and depth of joint.
 - 3. Terminate joint filler not less than 1/2 inch or more than 1 inch below finished surface for joint sealant.
 - 4. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
 - 5. During concrete placement, protect top edge of joint filler with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows:
 - 1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/4-inch-wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.
 - a. Tolerance: Ensure that sawed joints are within 3 inches either way from centers of dowels.
 - 2. Doweled Contraction Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.
- E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/8-inch radius. Repeat tooling of edges after applying surface finishes.

3.6 CONCRETE PLACEMENT

- A. Before placing concrete, inspect and complete formwork installation, steel reinforcement, and items to be embedded or cast-in.
- B. Remove snow, ice, or frost from subbase surface and steel reinforcement before placing concrete. Do not place concrete on frozen surfaces.
- C. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- D. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
- E. Do not add water to concrete during delivery or at Project site. Do not add water to fresh concrete after testing.
- F. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- G. Consolidate concrete according to ACI 301 by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.
 - 1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.
- H. Screed paving surface with a straightedge and strike off.

- I. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.
- J. Curbs and Gutters: Use design mixture for automatic machine placement. Produce curbs and gutters to required cross section, lines, grades, finish, and jointing.
- K. Cold-Weather Placement: Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing, or low temperatures. Comply with ACI 306.1 and the following:
 - 1. When air temperature has fallen to or is expected to fall below 40 deg F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F and not more than 80 deg F at point of placement.
 - 2. Do not use frozen materials or materials containing ice or snow.
 - 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in design mixtures.
- L. Hot-Weather Placement: Comply with ACI 301 and as follows when hot-weather conditions exist:
 - 1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated in total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 - 2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
 - 3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.7 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
 - 1. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch deep with a stiff-bristled broom, perpendicular to line of traffic.

3.8 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound or a combination of these as follows:
 - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
 - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover, placed in widest practicable width, with sides and ends lapped at least 12 inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears occurring during installation or curing period using cover material and waterproof tape.
 - 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas that have been subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating, and repair damage during curing period.

3.9 PAVING TOLERANCES

- A. Comply with tolerances in ACI 117 and as follows:
 - 1. Elevation: 1/2 inch.
 - 2. Thickness: Plus 3/8 inch, minus 1/4 inch.
 - 3. Surface: Gap below 10-foot- long, unlevelled straightedge not to exceed 1/2 inch.
 - 4. Alignment of Tie-Bar End Relative to Line Perpendicular to Paving Edge: 1/2 inch per 12 inches of tie bar.
 - 5. Lateral Alignment and Spacing of Dowels: 1 inch.
 - 6. Vertical Alignment of Dowels: 1/4 inch.
 - 7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Paving Edge: 1/4 inch per 12 inches of dowel.
 - 8. Joint Spacing: 3 inches.
 - 9. Contraction Joint Depth: Plus 1/4 inch, no minus.
 - 10. Joint Width: Plus 1/8 inch, no minus.

3.10 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
 - 1. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. or fraction thereof of each concrete mixture placed each day.
 - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 - 2. Slump: ASTM C 143; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
 - 3. Air Content: ASTM C 231, pressure method; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 - 4. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F and below and when it is 80 deg F and above, and one test for each composite sample.
 - 5. Compression Test Specimens: ASTM C 31; cast and laboratory cure one set of three standard cylinder specimens for each composite sample.
 - 6. Compressive-Strength Tests: ASTM C 39; test one specimen at seven days and two specimens at 28 days.
 - a. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at 28 days.
- C. Strength of each concrete mixture will be satisfactory if average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
- D. Test results shall be reported in writing to Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
- E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but will not be used as sole basis for approval or rejection of concrete.
- F. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Engineer.
- G. Concrete paving will be considered defective if it does not pass tests and inspections.

- H. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- I. Prepare test and inspection reports.

3.11 REPAIRS AND PROTECTION

- A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Engineer.
- B. Drill test cores, where directed by Engineer, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory paving areas with portland cement concrete bonded to paving with epoxy adhesive.
- C. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- D. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 02751

SECTION 02764 - PAVEMENT JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Cold-applied joint sealants.

- B. Related Sections:

- 1. Section 02741 "Asphalt Paving" for constructing joints between concrete and asphalt pavement.
 - 2. Section 02751 "Cement Concrete Pavement" for constructing joints in concrete pavement.

1.3 PRECONSTRUCTION TESTING

- A. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, Samples of materials that will contact or affect joint sealants.

- 1. Use manufacturer's standard test method to determine whether priming and other specific joint-preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
 - 2. Submit no fewer than eight pieces of each type of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
 - 3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
 - 4. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
 - 5. Testing will not be required if joint-sealant manufacturers submit joint-preparation data that are based on previous testing, not older than 24 months, of sealant products for compatibility with and adhesion to joint substrates and other materials matching those submitted.

1.4 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Certificates: For each type of joint sealant and accessory, from manufacturer.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for joint sealants.
- D. Preconstruction Compatibility and Adhesion Test Reports: From joint-sealant manufacturer, indicating the following:
 - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility with and adhesion to joint sealants.
 - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain each type of joint sealant from single source from single manufacturer.
- C. Product Testing: Test joint sealants using a qualified testing agency.
 - 1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.
- D. Preinstallation Conference: Conduct conference at Project site.

1.7 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer based on testing and field experience.
- B. Colors of Exposed Joint Sealants: Light Grey.

2.2 COLD-APPLIED JOINT SEALANTS

- A. Single-Component, Nonsag, Silicone Joint Sealant for Concrete: ASTM D 5893, Type NS.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Crafco Inc., an ERGON company; RoadSaver Silicone.
 - b. Dow Corning Corporation; 888.
 - c. Pecora Corporation; 301 NS.

2.3 JOINT-SEALANT BACKER MATERIALS

- A. General: Provide joint-sealant backer materials that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by joint-sealant manufacturer based on field experience and laboratory testing.
- B. Round Backer Rods for Cold-Applied Joint Sealants: ASTM D 5249, Type 3, of diameter and density required to control joint-sealant depth and prevent bottom-side adhesion of sealant.
- C. Backer Strips for Cold- and Hot-Applied Joint Sealants: ASTM D 5249; Type 2; of thickness and width required to control joint-sealant depth, prevent bottom-side adhesion of sealant, and fill remainder of joint opening under sealant.

2.4 PRIMERS

- A. Primers: Product recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.
- B. Joint Priming: Prime joint substrates where indicated or where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.
- B. Joint-Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install joint-sealant backings of kind indicated to support joint sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of joint-sealant backings.
 - 2. Do not stretch, twist, puncture, or tear joint-sealant backings.
 - 3. Remove absorbent joint-sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install joint sealants using proven techniques that comply with the following and at the same time backings are installed:
 - 1. Place joint sealants so they directly contact and fully wet joint substrates.
 - 2. Completely fill recesses in each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Nonsag Joint Sealants: Immediately after joint-sealant application and before skinning or curing begins, tool sealants according to the following requirements to form

smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint:

1. Remove excess joint sealant from surfaces adjacent to joints.
 2. Use tooling agents that are approved in writing by joint-sealant manufacturer and that do not discolor sealants or adjacent surfaces.
- F. Provide joint configuration to comply with joint-sealant manufacturer's written instructions unless otherwise indicated.

3.4 CLEANING

- A. Clean off excess joint sealant or sealant smears adjacent to joints as the Work progresses, by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

- A. Protect joint sealants, during and after curing period, from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately and replace with joint sealant so installations in repaired areas are indistinguishable from the original work.

3.6 PAVEMENT-JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Joints within cement concrete pavement.
1. Joint Location:
 - a. Expansion and isolation joints in cast-in-place concrete pavement.
 - b. Contraction joints in cast-in-place concrete slabs.
 - c. Other joints as indicated.
 2. Silicone Joint Sealant for Concrete: Single component, nonsag.
 3. Urethane Joint Sealant for Concrete: Multicomponent, pourable, traffic-grade.
 4. Joint-Sealant Color: Light Grey

END OF SECTION 02764

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.
- B. Including technical specification Division 1 through Division 48.

1.2 SUMMARY

- A. Section includes cast-in-place concrete for the following:
 - 1. Concrete Curbs surrounding proposed synthetic turf playing fields
 - 2. Concrete footings.
 - 3. Control, expansion and contraction joint devices
- B. Related Sections:
 - 1. Section 334600 Synthetic Turf Base Construction
 - 2. Section 323113 Chain Link Fences & Gates

1.3 REFERENCES

- A. American Concrete Institute:
 - 1. ACI 301 - Specifications for Structural Concrete.
 - 2. ACI 305 - Hot Weather Concreting.
 - 3. ACI 306.1 - Standard Specification for Cold Weather Concreting.
 - 4. ACI 308.1 - Standard Specification for Curing Concrete.
 - 5. ACI 318 - Building Code Requirements for Structural Concrete.

1.4 SUBMITTALS

- A. Section 013300 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit data on joint devices, attachment accessories and admixtures.
- C. Design Data:
 - 1. Submit concrete mix design for each concrete strength. Submit separate mix designs when admixtures are required for the following:
 - a. Hot and cold weather concrete work.
 - b. Air entrained concrete work.
 - 2. Identify mix ingredients and proportions, including admixtures.
- D. Concrete Testing - Contractor shall hire a third party testing company for all concrete testing. The City of Mobile is not responsible for testing or payment for testing.
- E. Manufacturer's Installation Instructions: Submit installation procedures and interface required with adjacent Work.

Figures Park
Combo Field Improvements
Mobile, AL - PR-066-22

1.5 CLOSEOUT SUBMITTALS

- A. Section 017000 - Execution Requirements: Closeout procedures.
- B. Project Record Documents: Accurately record actual locations of embedded utilities and components concealed from view in finished construction.

1.6 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 301.
- B. Conform to ACI 305 when concreting during hot weather.
- C. Conform to ACI 306.1 when concreting during cold weather.
- D. Acquire cement and aggregate from one source for Work.

PART 2 PRODUCTS

2.1 CONCRETE MATERIALS

- A. Cement: ASTM C150 Type I - Normal for all Exterior Concrete with a Maximum Water to Cement Ratio (w/c) of 0.45 and minimum f_c at 28 days of 4,500 psi with a maximum nominal aggregate size of $\frac{3}{4}$ ".
- B. Normal Weight Aggregates:
 - 1. Coarse Aggregate Maximum Size: 0.75 inches

2.2 ACCESSORIES

- A. Non-Shrink Grout: ASTM C1107, premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 4,500 psi in 28 days.

2.3 JOINT DEVICES AND FILLER MATERIALS

- A. Joint Filler: Asphalt impregnated fiberboard or felt, 1/4inch thick.

2.4 CONCRETE MIX

- A. Select proportions for concrete in accordance with ACI 318 trial mixtures or field experience.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 013000 - Administrative Requirements: Coordination and project conditions.
- B. Verify requirements for concrete cover over reinforcement.
- C. Verify anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with placing concrete.

3.2 PREPARATION

- A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent. Remove laitance, coatings, and unsound materials.
- B. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout.
- C. Remove debris and ice from formwork, reinforcement, and concrete substrates.

3.3 PLACING CONCRETE

- A. Place concrete in accordance with ACI 301.
- B. Notify testing laboratory and Architect/Engineer minimum 24 hours prior to commencement of operations.
- C. Ensure reinforcement, inserts, embedded parts, formed expansion and contraction joints, are not disturbed during concrete placement.
- D. Place joint filler in pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- E. Extend joint filler from bottom of slab to within 1/8 inch of finished slab surface.
- F. Install construction joint devices in coordination with pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- G. Install joint device anchors. Maintain correct position to allow joint cover to be flush with [floor] [and] [wall] finish.
- H. Install joint covers in longest practical length, when adjacent construction activity is complete.
- I. Deposit concrete at final position. Prevent segregation of mix.
- J. Place concrete in continuous operation for each panel or section determined by predetermined joints.

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- K. Consolidate concrete.
- L. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- M. Place concrete continuously between predetermined expansion, control, and construction joints.
- N. Do not interrupt successive placement; do not permit cold joints to occur.

3.4 CURING AND PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

3.5 FIELD QUALITY CONTROL

- A. Section 014500 - Quality Requirements
- B. Perform field inspection and testing in accordance with ACI 318 and applicable codes. The Contractor is responsible for employing the testing laboratory and the testing laboratory is to provide the results directly to the Owner's Representative.
- C. Provide free access to Work and cooperate with appointed firm.
- D. Submit proposed mix design [of each class of concrete] to [inspection and] testing firm for review prior to commencement of Work.
- E. Concrete Inspections:
 - 1. Continuous Placement Inspection: Inspect for proper installation procedures.
 - 2. Periodic Curing Inspection: Inspect for specified curing temperature and procedures.
- F. Strength Test Samples:
 - 1. Sampling Procedures: ASTM C172.
 - 2. Sample concrete and make one set of cylinders for every 150 cu yds or less of each class of concrete placed each day and for every 5,000 sf of surface area for slabs.
 - 3. When volume of concrete for any class of concrete would provide less than 5 sets of cylinders, take samples from five randomly selected batches, or from every batch when less than 5 batches are used.
 - 4. Make one additional cylinder during cold weather concreting, and field cure.
- G. Field Testing:
 - 1. Slump Test Method: ASTM C143/C143M.
 - 2. Air Content Test Method: [ASTM C173/C173M] [ASTM C231].
 - 3. Temperature Test Method: ASTM C1064/C1064M.
 - 4. Measure slump and temperature for each compressive strength concrete for each truck.

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5. Measure air content in air entrained concrete for each compressive strength concrete for each truck.
- H. Cylinder Compressive Strength Testing:
1. Test Method: ASTM C39.
 2. Test Acceptance: In accordance with ACI 318 and applicable codes.
- I. Core Compressive Strength Testing:
1. Sampling and Testing Procedures: ASTM C42/C42M.
 2. Test Acceptance: In accordance with ACI 318 and applicable codes.
 3. Drill three cores for each failed strength test from concrete represented by failed strength test.

3.6 PATCHING

- A. Allow Architect/Engineer to inspect concrete surfaces immediately upon removal of forms.
- B. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Architect/Engineer upon discovery.

3.7 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by Architect/Engineer.
- C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect/Engineer for each individual area.

END OF SECTION 033000

SECTION 09900 - PAINTING

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Painting and finishing of exposed exterior items and surfaces.
 - 2. Field painting of exposed bare electrical items.
 - 3. Field painting of exposed bare mechanical items.
- B. Section does not include:
 - 1. Prefinished items.
 - 2. Concealed surfaces.
 - 3. Finished metal surfaces.
 - 4. Operating parts.
- C. Related Sections:
 - 1. Section "Sealants" for sealants applied after paint application.

1.02 REFERENCES

- A. ASTM D 16 -- Standard Definitions of Terms Relating to Paint, Varnish, Lacquer, and Related Products; latest edition.

1.03 DEFINITIONS

- A. Conform to ASTM D 16 for interpretation of terms used in this section.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's technical information, including paint label analysis and application instructions for each material proposed for use.
- B. Samples: Prior to beginning work, submit samples for the Architect's review of color and texture only. Label and identify each material application and location for each coat of each finish sample.
 - 1. Submit samples as requested by the Architect until acceptable sheen, color, and texture are achieved.
 - 2. On 12- by 12-inch hardboard, submit 2 samples of each color and material.
- C. Product Reports: Showing compliance with Basis-of Design Products.

1.05 QUALITY ASSURANCE

- A. Single Source Responsibility:

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1. To the maximum extent practicable, select a single manufacturer to provide all materials required by this section, using additional manufacturers to provide systems not offered by the selected principal manufacturer.
 2. For each individual system: Provide primer and other undercoat paint produced by same manufacturer as finish coat. Use only thinners approved by paint manufacturer and use only within recommended limits.
- B. Applicator: Firm with not less than 3 years of successful experience in painting work similar in scope to work of this project.
1. Maintain throughout duration of the work a crew of painters who are fully qualified to satisfy requirements of the specifications.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to project site in original, new, unopened packages and containers bearing the manufacturer's name and label.
- B. Store materials in tightly covered containers.
1. Maintain containers in a clean condition, free of foreign materials and residue.
- C. Store materials at ambient temperature of between 45 degrees F minimum and 90 degrees F maximum, in a well-ventilated area.
- D. Ensure that storage area is neat and orderly. Remove oily rags and waste daily.
- E. Take precautionary measures to prevent fire and health hazards.

1.07 PROJECT CONDITIONS

- A. Environmental Requirements:
1. Comply with manufacturer's recommendations.
 2. Provide continuous ventilation and heating to prevent accumulation of hazardous fumes and to maintain surface and ambient temperatures above 45 degrees F for 24 hours before, during, and for 48 hours after application of finishes.

1.08 COORDINATION

- A. General: Perform painting work in proper sequence with work of other trades to avoid damage to finished work.
- B. Primers: Provide finish coats which are compatible with prime paints used. Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates.
1. Upon request, furnish information to other trades on characteristics of finish materials proposed for use.
 2. Provide barrier coats over incompatible primers, or remove and re-prime as required.
 2. Notify the Architect in writing of any anticipated problems using specified coating systems with substrates primed by others.

PART 2 - PRODUCTS

2.02 PRODUCTS

- A. Products: Named products and the tested performance capability of those products shall be the Basis-of Design for products provided by one of the other indicated manufacturers. Subject to compliance with requirements, provide product indicated in paint schedule or comparable product by one of the following:
1. The Glidden Company (GC).
 2. PPG Industries, Inc./Pittsburgh Paints (PPG).
 3. Sherwin Williams Company (SWC).

2.03 MATERIALS

- A. Material Quality:
1. Materials not displaying manufacturer's identification as a standard, best-grade product will not be acceptable.
- B. Colors and Textures:
1. For multicoat systems, apply each coat using a successively darker tint or shade, unless approved otherwise.
 3. Top coat colors: As indicated in color schedule.
- C. Color Pigments:
1. Pure, nonfading paints to suit substrates and service indicated.
 2. Lead content:
 - a. Not more than 0.06 percent lead, based on total nonvolatile (dry-film) weight.
 - b. This limitation is extended to all surfaces readily accessible to children under 7 years of age.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Verify that surfaces and conditions are ready for work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished, prior to commencement of work.
1. Report any unsatisfactory condition in writing to the Contractor.
 2. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to the applicator.
 3. Starting of painting work in any particular area will be construed as acceptance of surfaces and conditions within that area.

- D. Do not paint over any code-required labels, equipment identification, performance rating, name, or nomenclature plates.

3.02 PREPARATION

- A. General: Prepare and clean each substrate condition in accordance with manufacturer's instructions and as herein specified.
 - 1. Provide barrier coats or remove and reprime incompatible primers as required.
 - 2. Remove electrical plates, hardware, light fixture trim, and fittings prior to preparing or finishing surfaces.
 - a. Reinstall removed items following the completion of painting of each space or area.
 - 3. Clean surfaces before applying surface treatment.
 - a. Remove oil and grease prior to mechanical cleaning.
 - b. Coordinate cleaning and painting to ensure that no cleaning contaminants will fall onto newly painted areas.
- B. Cementitious Materials:
 - 1. Prepare cementitious surfaces to be painted by removing efflorescence, chalk, dust, dirt, grease, and oils, and by roughening as required to remove glaze.
 - 2. Determine alkalinity and moisture content of surfaces to be painted by performing appropriate tests.
 - 3. Do not paint over surfaces where test results exceed results permitted in manufacturer's printed directions.
- C. Wood:
 - 1. Clean wood surfaces to be painted with scrapers, mineral spirits, and sandpaper, as required.
 - 2. Sand smooth those finished surfaces exposed to view and dust off.
 - 3. Scrape and clean small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer before application of priming coat.
 - 4. After priming, fill holes and imperfections in finish surfaces with putty, plastic wood-filler, or exterior caulking compound as applicable.
 - a. Sand smooth when dried.
 - 5. Prime wood required to be job-painted.
 - a. Do not apply coating to wood having moisture content in excess of that recommended by coating manufacturer.
 - b. For other than panel products, prime all six (6) surfaces. Field cuts shall be primed prior to installation.
- D. Ferrous Metals:
 - 1. Clean ferrous surfaces which are not galvanized or shop-coated, removing oil, grease, dirt, loose mill scale, or other foreign substances by means of solvents, wire brushing, or sandblasting.
 - 2. Touch up shop-applied prime coats wherever damaged or bare, where required by other sections of these specifications.

3. Clean and touch up with same type shop primer.
- E. Galvanized Surfaces:
1. Clean free of oil and surface contaminants with non-petroleum-based solvent.
 2. Apply coat of etching solvent.
- F. Impervious Surfaces:
1. Remove mildew by scrubbing with solution of trisodium phosphate and bleach.
 2. Rinse with clean water and allow surface to dry.

3.03 MATERIALS PREPARATION

- A. Mix and prepare painting materials in accordance with manufacturer's directions.
1. Stir materials before application to produce a mixture of uniform density; stir as required during application.
 2. Do not stir surface film into material.
 3. Remove film and, if necessary, strain material before using.
 4. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials and residue.

3.04 APPLICATION

- A. General:
1. Apply paint in accordance with manufacturer's directions.
 2. Use applicators and techniques best suited for substrate and type of material being applied.
 - a. Surface imperfections will not be acceptable.
 - b. Where items or surfaces are not specifically mentioned, paint the same as similar adjacent materials or areas.
 - (1) If color or finish is not designated, the Architect will select these from standard colors or finishes available.
 - c. Apply additional coats until paint film is of uniform finish, color, and appearance.
 - (1) Ensure that all surfaces receive a dry film thickness equivalent to those of flat surfaces.
 - d. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces.
 - e. Paint surfaces behind permanently fixed equipment or furniture with prime coat only before final installation of equipment.
 - g. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
 - h. Finish doors on tops, bottoms, and side edges the same as exterior faces unless otherwise indicated.
- B. Scheduling Painting:
1. Apply first-coat material to prepared surfaces as soon as practicable and before subsequent surface deterioration.
 - a. Do not recoat until paint has dried.

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- C. Minimum Coating Thickness:
 - 1. Apply materials at rate to establish a total dry film thickness as indicated or, if not indicated, as recommended by coating manufacturer.

- D. Mechanical and Electrical Items:
 - 1. Paint electrical items exposed in equipment rooms and in occupied spaces.
 - 2. Paint mechanical items exposed in equipment rooms and in occupied spaces.
 - 3. Mechanical items to be painted include, but are not limited to, the following:
 - a. Piping, pipe hangers, and supports.
 - b. Accessory items.
 - c. Others as noted on drawings.
 - 4. Electrical items to be painted include, but are not limited to, the following:
 - a. Conduit and fittings.
 - c. Others as noted on drawings.

- E. Prime Coats:
 - 1. Apply prime coat on material which is required to be painted or finished, and which has not been prime coated by others.

- F. Completed Work:
 - 1. Match approved samples for color, texture, and coverage.
 - 2. Remove, refinish, or repaint work not in compliance with specified requirements.

3.05 CLEANING AND PROTECTION

- A. Cleaning:
 - 1. During progress of work, remove from site discarded paint materials, rubbish, cans, and rags at end of each work day.
 - 2. Upon completion of painting work, clean window glass and other paint-spattered surfaces.
 - a. Do not scratch or otherwise damage finished surfaces.

- B. Protection:
 - 1. Protect work of other trades against damage by painting and finishing work.
 - a. Correct any damage to the Architect's satisfaction.
 - 2. Provide "wet paint" signs as required to protect newly painted finishes.
 - 3. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.
 - 4. At completion of work of other trades, touch up and restore all damaged or defaced painted surfaces.

3.06 EXTERIOR PAINT SYSTEMS

- A. Galvanized Metal;
 - 1. Semigloss, opaque:
 - a. Bottom coat: Pro Industrial Pro-Cryl Universal Primer B66-310 Series.
 - b. Two Top Coats: Pro Industrial Zero VOC Acrylic (B66-600 Series).

- B. Concrete Masonry Units (CMU):

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1. Semigloss, opaque:
 - a. Bottom coat: Loxon Block Surfacer A24W200 series
 - b. Two top coats: ConFlex XL High Build Smooth (A05-450 Series)

- C. Wood:
 1. Semi-gloss, opaque:
 - a. Bottom coat: Exterior Oil Based Wood Primer (Y24W08020).
 - b. Two top coats: Pro Industrial Zero VOC Acrylic (B66-600 Series)

END OF SECTION

SECTION 116833 – ATHLETIC FIELD EQUIPMENT

PART 1 GENERAL

1.01 WORK INCLUDED

A. Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. Baseball Foul Poles
2. Batting Cage System
3. Home Plate & Anchor
4. Baseball Base Anchors & Bases
5. Pitching Rubber & Anchor

1.02 RELATED WORK

A. Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:

1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
2. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
3. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete and Asphalt

1.03 REFERENCES

A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. American Sports Builders Association (ASBA)
3. Manufacturer's Data and Recommended Installation Requirements

1.04 SUBMITTALS

A. Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives review.

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B. Shop Drawings

1. Provide drawings of the manufacturers recommended installation and engineered foundation requirements prior to actual field installation work, for Architects or Owners representatives review.
2. **Provide engineered footing design by a Alabama Licensed Engineer for Architects or Owners review and records for foul poles & batting cage frame.**

1.05 QUALITY ASSURANCE

- A. Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.06 PRODUCT DELIVERY AND STORAGE

- A. Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

2.01 Plate Mount High School Baseball Foul Pole & Accessories

A. MODEL:

1. FP630PL Plate Mount Baseball Foul Pole as manufactured and/or Supplied by:

Sportsfield Specialties, Inc.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
f. 607-746-8481
www.sportsfieldspecialties.com
(Basis of Design)

OR Approved Equal

B. COMPONENTS:

1. Foul Pole Upright:
 - a. 6" Schedule 40 Aluminum Pipe (6.625"O.D. x .280" Wall)
 - b. 30' Height Above Finish Grade
 - c. Super Durable Powder Coated Finish

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- i. Color: Yellow
- d. Base Plate Mount
- 2. Base Plate Mounting Kit
- 3. Assembly Hardware
- 4. Contractor shall included engineered footing design.

2.03 Batting Cage System & Accessories

A. MODEL:

- 1. NC-BC1 Single Batting Cage System & Net Tunnel as Manufactured and/or Supplied by:

Net Connection, LLC
7355 Gadsden Hwy.
Trussville, AL 35173
p. 205-508-5902
c. 205-948-7504
www.netconnectionllc.com
(Basis of Design)

OR Approved Equal

2.04 Home Plate

A. MODEL:

- 1. SHP-UM – Hollywood MLB Universal Home Plate as Manufactured & Supplied by:

Sportsfield Specialties, Inc.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfield.com
(Basis of Design)

OR Approved Equal

B. COMPONENTS:

- 1. Home Plate:
 - a. 1.5” Thick
 - b. 7” Stanchion Mount with Ground Anchor & anchor plug

2.05 Base Anchor & Bases

A. MODEL:

1. SHIBL – Schutt/Hollywood Set of three Ground Anchor Mounts (3) & Set of Three (3) SHIBL Schutt Hollywood Impact Bases as Manufactured and Supplied by:

Sportsfield Specialties, Inc.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfield.com
(Basis of Design)

OR Approved Equal

B. COMPONENTS:

1. SHIBL – Schutt/Hollywood Impact Bases.
 - a. Include a set of three (3) Schutt Hollywood Impact Bases.
 - b. Regulation size 15”x15”x2.5”
 - c. Include a set of three (3) 6” ground mount anchors and base plugs.

2.06 Pitching Rubber

A. SHBBPB – Schutt Four Sided Pitching Rubber as Manufactured and Supplied by:

Sportsfield Specialties, Inc.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfield.com
(Basis of Design)

OR Approved Equal

B. COMPONENTS:

1. SHBBPB- Schutt Four Sided Pitching Rubber:
 - a. Dimensions: 6”W x 24”L Four sided
 - b. Tube lining shall be filled with concrete.

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

- A. All field furnishing, equipment, and accessories shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings.
- B. Concrete foundation design by a Alabama licensed engineer and installation shall be provided by this installer.**
- C. Installer should have a minimum of five (5) football goal post, foul pole, & backstop net systems installations or similar experience in the previous three (3) years.

END OF SECTION

SECTION 328400 - PLAYING FIELD IRRIGATION

PART 1 - GENERAL

1.1 SUMMARY

- A. The Contractor shall provide a total ‘turn-key’ installation for the site. This includes all equipment necessary to install a conventional wired system, connecting with the Controller, including necessary wiring, communication equipment and lines needed to communicate with the controllers. The Contractor shall include all equipment and labor necessary to provide a fully functional, centrally controlled irrigation system installation at the point of final acceptance and turn-over to the Owner.
- B. Contractor shall provide full documentation of the warranty, terms and conditions of the warranty for all equipment.
- C. The system shall provide 100% irrigation coverage.

1.2 SUBMITTALS

- A. Contractor shall submit manufacturers product cut sheets for all irrigation materials to be used as specified on the bid documents.

1.3 QUALITY ASSURANCE

- A. Contractor’s Quality Assurance Responsibilities: Contractor is solely responsible for quality control of the Work.
- B. Permits and Fees: Contractor is responsible to obtain all required permits and pay all associated fees unless otherwise noted.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store PVC pipe in a neat and orderly manner fully supported and protected from sunlight.
- B. All equipment shall be delivered, unloaded and handled so as to protect from damage at all times.

1.5 PROJECT / SITE CONDITIONS

- A. The site irrigation water source shall be a 1” irrigation meter and backflow provided by owner.

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- B. PVC shall not be cemented during wet conditions per the discretion of Owner's Representative.
- C. Trench excavation and backfilling shall not be performed during excessively wet conditions per the discretion of Owner's Representative.

1.6 SEQUENCE AND SCHEDULING

- A. The Contractor shall be solely responsible for coordinating, sequencing and scheduling all work with all applicable trades and/or sub-contractors so as to insure proper and timely performance.

1.7 WARRANTY

- A. Contractor shall provide a written warranty covering the entire system against defects in installation, workmanship and equipment for a period of one year from date of Final Acceptance.
- B. After the system is installed and approved, instruct groundskeeper personnel and maintenance staff in the complete operation, winterization, and maintenance of the system.

1.8 MANUFACTURER'S WARRANTY

- A. Contractor shall provide Owner with a warranty transfer that shall confer all applicable product warranties and replacement benefits to the Owner upon final acceptance.
- B. Provide this warranty transfer for each manufacturer whose products have been installed on the project.

1.9 MAINTENANCE

- A. Service: Contractor shall service and maintain system until the work has been deemed Substantially Complete.
- B. Irrigation shall be under full automatic operation for a period of two days prior to any planting in a given area.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Manufacturer: Subject to compliance with requirements, provide products of the following:
 - 1. RainBird Sprinkler Mfg., Co.

Or approved equal.

2.2 PIPE MATERIALS

- A. Plastic Pipe: All pipe and hose is free of blisters, internal striations, cracks or any other defects or imperfections. The pipe and hose are continuously and permanently marked with manufacturer's name, material type, size, and schedule or class and quality control identifications.
- B. Mainline 3" or smaller: Schedule 40 or 21 Class 200, Type 1120-1220 polyvinyl chloride (PVC); ASTM D1784 and D1785; uniformly white in color.
- C. Lateral: Class 200 (SDR 21); uniformly white in color.
- D. Sleeves: All new sleeves shall be PVC Schedule 40. Install sleeves in locations as shown on the drawings and at the depths specified for laterals and mainlines.

2.3 FITTINGS

- A. Plastic:
 - 1. Mainline 3" or smaller: Same as lateral.
 - 2. Lateral: ASTM D 2467, Schedule 40, socket-type, Type 1, Grade 1 polyvinyl chloride (PVC) with solvent weld or threaded connections in conformance with ASTM D1784 and D2466: uniformly white in color.
- B. Nipples:
 - 1. Metallic: Schedule 40 red brass (35% copper, 15% zinc) pipe: threaded both ends. Pipe shall be in accordance with ASTM B43.
 - 2. Plastic: Factory-threaded Schedule 80, Type 1, Grade 1 polyvinyl chloride (PVC) pipe, threaded both ends. Pipe shall be in conformance with ASTM D1784 and D1785. Color: gray.

2.4 JOINING MATERIALS

- A. Solvent Cement: ASTM F 656 primer and ASTM D 2564 solvent cement in color other than orange, compatible with PVC pipe and of proper consistency.
- B. Primer: IPS Corporation Weld-on #P-70.
- C. Cement: IPS Corporation Weld-on #705 for Class 200 P.V.C. or schedule 40 P.V.C. IPS Corporation Weld-on #795 for flexible P.V.C. to rigid P.V.C. connections.

2.5 VALVES

- A. Manual Isolation Valves:
 - 1. Plastic: PVC Schedule 40
- B. Electric Remote Control Valves: RainBird As specified on bid drawings or approved equal.
- C. Valve Boxes: Valve boxes shall have green lids and shall be of a variety as produced by Carson, RainBird or acceptable equal.
 - o Valve boxes shall be lockable as specified in bid drawings.

2.6 SPRINKLER HEADS

- A. All rotary and spray sprinkler heads shall be RainBird or approved equal as specified on bid drawings.

2.7 AUTOMATIC CONTROL SYSTEM

- A. General: RainBird Controllers shall function as the field controller and communication interface. See bid drawings for controller size and location.
- B. No 2-wire systems will be considered.

2.8 GROUNDING

- A. It is the responsibility of the Irrigation Contractor to provide grounding for all electrical irrigation equipment installed by him/her in relation to the irrigation control system.

2.9 SPARE WIRES

- A. The contractor shall provide two sets of spare wires from the first and last valve in the system installed with the control wire in the same trench. Label each spare wire shall be tagged with the appropriate markings to identify the remote control valve. Terminate all spare wires in the controller box with the tags.

2.10 MISCELLANEOUS TOOLS & EQUIPMENT

- A. Low Voltage Wire:
 - 1. Control wires shall be UL rated for direct burial, Type UF, 14-gauge wire. Insulating jacket color shall be red.

2. Common wires shall be UL rated for direct burial, Type UF, 12-gauge wire. Insulating jacket color shall be white.
 3. Spare control wires shall be UL rated for direct burial, Type UF, 14-gauge wire; Insulating jacket color shall be blue.
 4. Spare common wire shall be UL rated for direct burial, Type UF, 12-gauge wire. Insulating jacket color shall be green.
 5. Splice connectors: 3M "DBY-6" splice connectors or acceptable equal.
- B. Valve Tags: Provide identification tag on flow control handle shaft, aluminum, plastic or other durable material, with valve station and controller number identified in 1/8" minimum letters.
- C. Drainage Backfill: Provide and install clean gravel or crushed stone, graded from 3 inches maximum to 3/4 inch minimum.

PART 3 - EXECUTION

3.1 GENERAL

- A. Verification of Conditions: Examine the areas to receive the Work and the conditions under which the Work would be performed. Remedy conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.
- B. Supervision: The Contractor, personally or through an authorized and competent representative shall supervise the work constantly, and shall as far as possible keep the same foremen and workmen on the job from commencement to completion. The workmanship of the entire job must in every way be first class, and only experienced and competent workmen shall be utilized for installation

3.2 PROTECTION

- A. The Contractor shall be responsible for storage of materials and any damage to the work covered by these Specifications before the final acceptance of the work.
- B. Protect work and materials from damage during construction. Storage of polyvinyl chloride (PVC) pipe and fittings shall be protected from direct sunlight. Beds on which materials are stored must be the full length of the pipe to avoid damage. Any pipe that has been damaged or dented shall not be used in the work.
- C. Any existing structures, equipment, utilities, pavement, landscaping, etc., damaged by Irrigation Contractor during the course of the work, including any damage caused by leakage or settling of piping systems being or having been installed by them, shall be restored at Contractor's expense and to the Owner's satisfaction.

- D. Securely cover openings into the system and cover apparatus, equipment, and appliances, both before and after being set in place, to prevent obstruction in the pipes and the breakage, misuse or disfigurement of the apparatus, equipment or appliances.
- E. Provide a dedicated trace wire for mainlines and laterals by taping (with electrical-rated tape) to the top of the pipe at 10-foot intervals along the entire length of the pipe. Also provide 24-inch coiled wire at all termination points.

3.3 PIPELINE ASSEMBLY

- A. Installation of all pipes and fittings shall be in strict accordance with the manufacturer's written specifications. Deviations from these specifications shall be permitted only with the written approval of Owner's Representative.

3.4 AUTOMATIC CONTROLLER

- A. The Contractor shall verify power location and type, as well as power connection requirements at that location. The Contractor shall be responsible to successfully connect the power to the controller. See bid drawings for location and details.

3.5 CLOSING OF PIPE AND FLUSHING LINES

- A. Flushing: Lines shall be thoroughly flushed out before installing quick coupling valves sprinklers or emitters.

3.6 BACKFILLING AND COMPACTING TO

- A. Rock free backfill material for mainline pipe is to be tamped in 4" (100 mm) layers under the pipe and uniformly on both sides of the full width of the trench or as shown, and the full length of the pipe. Materials are to be sufficiently damp to permit thorough compaction under and on each side of pipe, to provide support free of voids. PVC pipe is not to rest on concrete, rock, wood blocks, or similar items.
- B. All pipe is to be immediately backfilled with preliminary backfill sufficient to prevent arching or slipping under pressure.
- C. Other than for preliminary backfill over pipe, do not allow or cause any of the work to be covered before it has been inspected, tested and approved by the Owner's Representative.
- D. Upon approval of Owner's Representative, proceed to place remaining backfill. Backfill material will be clear of all debris and rocks larger than 2" (50 mm) in diameter. Finish grade of all trenches must conform to adjacent grades without dips, sunken areas, humps or other irregularities. Dispose properly of excess debris.

- E. Restore all surfaces, existing underground installations, damaged or cut as a result of the excavations to their original condition.

3.7 ADJUSTING THE SYSTEM

- A. Adjust alignment and coverage of all heads. If it is determined that adjustments in the irrigation equipment will provide proper and more adequate coverage, make all necessary changes or make arrangements with the manufacturer to have adjustments made, prior to any planting. These changes or adjustments shall be made without additional cost.
- B. Adjust and balance system to eliminate over spray and fogging and as directed by Architect.

3.8 TURN-OVER MATERIALS

- A. Final As-built Drawings: Two sets of these shall be produced, one for placement at or within the appropriate irrigation controller cabinet reduced to 11" x 17" and one full size set for storage at another location desired by the Owner's Representative.
- B. Operational and Maintenance Data: Submit two copies of owners manuals, maintenance schedule, and operational schedule in a folder labeled and indexed.
- C. Written One year warranty.

3.9 WARRANTY AND MAINTENANCE INSTRUCTIONS

- A. Fill and repair all depressions and replace all planted areas due to the settlement of irrigation trenches for one year following the completing and acceptance of the job. Use only approved planting soil materials.
- B. Instruct Owner's personnel in complete and proper operation, maintenance and winterization of the system prior to Final Acceptance.

END OF SECTION 328400

SECTION 329100 - PLAYING FIELD CONSTRUCTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish all labor, materials, facilities, transportation, and services to complete all playing field construction and related work as shown on the Drawings and specified herein.
- B. Scope of work: The general extent of the playing fields are shown on the Drawings and can include, but may not be limited to the following:
 - 1. Placement of a uniform depth of topsoil on prepared subgrade (herein after referred to as the "Topsoil").
 - 2. Placement of uniform 6" depth of infield clay on prepared sub-grade.
 - 3. Incorporation of pre-plant fertilizer into the topsoil.
 - 4. Establishment and Verification of Finish Grade.

1.2 RELATED SECTIONS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and applicable Division One and Division Two Specification sections, apply to work of this section.

1.3 REFERENCES AND REGULATORY REQUIREMENTS:

- A. American Society for Testing and Materials (ASTM)
 - 1. ASTM C136 - Sieve Analysis of Fine & Coarse Aggregates
 - 2. ASTM - D3665 -Random Sampling of Construction Materials
 - 3. ASTM D854 – Specific Gravity of Soils
 - 4. ASTM D2974 - Standard Test Method for Moisture, Ash and Organic Matter of Peat and Other Organic Soils
 - 5. ASTM F1632 - Standard Test Method for Particle Size Analysis and Sand Shape Grading Putting Greens and Sports Field Root Zone Mixes
 - 6. ASTM F1647 - Standard Test Method for Organic Matter Content of Putting Greens and Sports Field Root Zone Mixes (Method B)
 - 7. ASTM C136 - Sieve Analysis of Fine & Coarse Aggregates

1.4 SUBMITTALS

- A. Conform to requirements of applicable Division One and Contract specifications, General Conditions and Special Conditions.
- B. Bidder Qualifications: Contractor shall be actively and directly engaged in constructing native soil natural grass athletic fields for a period of five (5) or more years. Provide proof of three (3) such installations that have been in use for three (3) or more years.
 - 1. Projected Schedule: All contractors shall submit a proposed schedule for the project.
- C. Existing Topsoil Material Samples: Contractor shall submit to Owner's Testing Agent a one-gallon sample of existing topsoil from the field. This sample shall be a composite sample taken from five different locations evenly spread around existing field. Thoroughly mix the material after all samples are taken.

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Remove one gallon out of the bucket to fill a zip-lock bag. Double bag the composite sample. Label the composite sample appropriately with a permanent marker.

- D. Imported Topsoil Material Samples: Contractor shall submit to Owner's Testing Agent a one-gallon sample of topsoil to be imported. This sample shall be a composite sample taken from the respective stockpiled material allocated for this work. Thoroughly mix the material after all samples are taken. Remove one gallon out of the bucket to fill a zip-lock bag. Double bag the composite sample. Label the composite sample appropriately with a permanent marker indicating from which stockpile the sample was taken. Contractor shall maintain a photographic record of the sampled stockpile
- E. The Owner's Testing Agent will evaluate this material using the appropriate testing protocols to determine nutrient content of the soil.
- F. Certificates: Submit "cut-sheets" or other product literature showing certified chemical analysis of the following:
 - 1. All infield clay, fertilizers, soil amendments, herbicides.

1.5 DELIVERY, STORAGE AND HANDLING

- A. General:
 - 1. Handle and store all products of this Section in such a manner as to protect them from damage at all times.
 - 2. Storage of products on-site shall be coordinated by the contractor in an orderly manner so as not to unnecessarily impede the work or reasonable use of the project site.
- B. Fertilizers:
 - 1. Deliver in original, unopened containers with original labels intact and legible which state the guaranteed chemical analysis.
- C. Bulk Material:
 - 1. Coordinate delivery and storage of bulk material with Owner's Representative.
 - 2. Confine materials to neat piles in areas acceptable to Owner's Representative.

1.6 PROJECT/SITE CONDITIONS

- A. Comply with the environmental protection and safety requirements of the Owner and all governmental authorities having jurisdiction. Keep dust to a minimum. Maintain streets and walks free of mud, dirt and debris.
- B. Restoration of Damaged Property: When or where in the execution of the work under this contract, any direct or indirect damage injury is done to public or private property by or on account of any act, omission, neglect, or misconduct, the Contractor, at no additional cost to the Owner, shall restore the damaged property to a condition equal to that existing before damage or injury was done. Repair, rebuild or otherwise restore property as directed or make good such damage or injury in an acceptable manner.
- C. Playing Field Construction operations shall not be conducted under the following conditions:

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1. Freezing weather
2. High winds
3. Excessively wet conditions.

- D. Construction Surveying: The Contractor shall be responsible for all construction surveying required for the proper location of all work covered hereunder. The Contractor shall provide survey services to perform the final grade conformance survey. Any required additional survey costs shall be paid by the contractor.
- E. The Playing Field subgrade shall be a smooth, clean basin free of any debris and/or loose soil to the tolerances specified.

1.7 GUARANTY

- A. All work executed and all materials provided under or used under this Section shall be guaranteed to be free of defects and poor workmanship as set forth in the contract documents.
- B. Repair all defective materials and work as acceptable to the Owner's Representative during guaranty period.

PART 2 - PRODUCTS

2.1 TOPSOIL MATERIALS

A. Topsoil for Playing Fields

1. Topsoil shall be a natural friable soil, possessing characteristics of representative productive soils in the vicinity from which it is obtained.
2. Topsoil shall be classified according to the USDA soil textural classification. USDA definitions are as follows:

Sand – 270 mesh (0.05mm) to 18 mesh (1.0mm)
Silt – 0.002mm to 0.05mm
Clay – < 0.002mm
3. The soil shall meet classification requirements for a sandy loam to silt loam texture. Soils approved for use in specific planting areas shall remain consistent in sand, silt, and clay composition.
4. The topsoil shall be free from subsoil, clay lumps, stones or similar objects larger the 3/8" in greatest diameter, brush, stumps, roots, objectionable weeds or litter, excess acid or alkali or ay other material or substance which may be harmful to plant growth or a hindrance to subsequent smooth grading, planting and maintenance operations. Foreign material shall not exceed 2% by volume or weight. Texture to be defined by % sand, % clay, and % silt taken from sample material provided for testing.
5. The source of topsoil shall be the existing soil on the site and currently on the playing fields. If additional is required, the stockpiled source should be made known to the Landscape Architect. The topsoil shall be stockpiled and tested and approved prior to placement on the site. Consistent composition of topsoil will be required throughout the entire project.

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2.2 PRE-PLANT FERTILIZERS

A. Granular Humic Acid

1. GCO Granular Humic Acid

Gulf Coast Organic, Inc.
17588 Highway 98 West
Foley, AL 36535
Phone: 251-952-4769
www.gcogrows.com

Or Approved Equal

B. Dolomitic Lime

1. Pelletized Dolomitic Lime

Gulf Coast Organic, Inc.
17588 Highway 98 West
Foley, AL 36535
Phone: 251-952-4769
www.gcogrows.com

Or Approved Equal

C. Pre-Plant Fertilizer

1. Primeria Organic 3-3-3 Fertilizer

Gulf Coast Organic, Inc.
17588 Highway 98 West
Foley, AL 36535
Phone: 251-952-4769
www.gcogrows.com

Or Approved Equal

2.3 INFIELD MATERIALS FOR SKINNED AREAS AND MOUND AREAS

A. The infield skinned areas shall be installed to a uniform depth of 6" min. over a compacted subgrade to 95% standard proctor.

B. The Infield Materials for Skinned Area shall be 70% Clay and 30% Sand and intended for use for infields and pitching mounds. The color must be red to brown in color.

C. The Infield Materials for the Skinned Areas shall be GCO Infield Mix as distributed by:

Gulf Coast Organic, Inc.
17588 Highway 98 West
Foley, AL 36535
Phone: 251-952-4769
www.gcogrows.com

Or Approved Equal

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2.4 INFIELD CONDITIONER

- A. Infield Conditioner shall be an illite clay with 60% minimum amorphous silica. Material must be processed in a rotary kiln operation at temperatures not less than 1300 degrees Fahrenheit. Product must then be screened and de-dusted.
- B. The Infield Conditioner shall be Turface MVP as distributed by:

Gulf Coast Organic, Inc.
17588 Highway 98 West
Foley, AL 36535
Phone: 251-952-4769
www.gcogrows.com

Or Approved Equal

PART 3 - EXECUTION

3.1 PLACING TOPSOIL MATERIALS

- A. Materials shall not be saturated, nor have excessive free water during mixing. Materials shall be evenly and uniformly distributed in the amended soil mix.
- B. In performing this work, Contractor shall avoid damage to any existing structures or features of the playing field or features under construction, such as grading, drainage and irrigation systems. The Contractor shall repair any such damage at his own expense.
- C. The topsoil material shall be placed at the edge of the field and pushed to the center with low weight displacement track equipment. Alternative methods shall be approved by the Landscape Architect.
 - 1. Under no circumstances will loaded rubber-tired vehicles or equipment with a loading rate in excess of 5-lbs/in² be allowed on the drainage fill layer prior to or during the spreading of the topsoil material. The Contractor shall not leave any wheel ruts and the subgrade must remain smooth.
- D. Prevent contamination or mixing of topsoil with other materials. Remove contaminated materials as directed by the Owner's Representative.
- E. Truck delivery of materials into the site must be accomplished in such a manner as to not alter the subgrade and/or damage irrigation equipment and systems.
- F. Provide Topsoil material throughout the playing fields in a smooth and compacted finished condition. Bring topsoil material to the designed grade by alternately raking, watering and rolling. The entire playing field shall then be checked for irregularities and adjusted to a uniform grade.
- G. Contractor shall avoid using the same path to place and install the topsoil to minimize and avoid compaction of the soil during construction. If an area seems to be consistent with over-trafficking and compaction, at the discretion of the Landscape Architect, the Contractor shall replace with area with new topsoil material.

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3.2 APPLYING PRE-PLANT FERTILIZER

- A. Apply pre-plant fertilizer (3-3-3) at a rate of 600 lbs. per acre and incorporated into topsoil to a depth of 1 to 3 inches. Pre-plant fertilizer should be applied to surface and watered with two (2) passes of an irrigation head. Pre-plant fertilizer should not be applied more than four (4) hours before grassing operations.
- B. Apply Dolomitic Lime at a rate of 1000 lbs per acre. Dolomitic Lime shall be spread over the field and incorporated into topsoil to a depth of 1 to 3 inches.
- C. Apply Granular Humic Acid at a rate of 350 lbs per acre. Incorporated to a depth of 1 to 3 inches

3.3 FINISHED GRADE VERIFICATION

- 1. Contractor shall schedule a site inspection with Landscape Architect with a min. of 48 Hours notice to review onsite finished grades. Contractor shall have at minimum a calibrated laser transit set up during meeting and be prepared to spot check grades for verification. No sodding shall take place until finished grade verification inspection is complete.
- 2. Contractor shall address and repair elevations found to deviate from the drawings and that do not ensure smooth, consistent, positive drainage off of field.

END OF SECTION 329100

SECTION 329113 - SOIL PREPARATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes planting soils specified by composition of the mixes.
- B. Related Requirements:
 - 1. Section 329200 "Lawns and Grasses" for placing planting soil for turf and grasses.

1.3 DEFINITIONS

- A. AAPFCO: Association of American Plant Food Control Officials.
- B. Backfill: The earth used to replace or the act of replacing earth in an excavation. This can be amended or unamended soil as indicated.
- C. CEC: Cation exchange capacity.
- D. Compost: The product resulting from the controlled biological decomposition of organic material that has been sanitized through the generation of heat and stabilized to the point that it is beneficial to plant growth.
- E. Duff Layer: A surface layer of soil, typical of forested areas, that is composed of mostly decayed leaves, twigs, and detritus.
- F. Imported Soil: Soil that is transported to Project site for use.
- G. Layered Soil Assembly: A designed series of planting soils, layered on each other, that together produce an environment for plant growth.
- H. Manufactured Soil: Soil produced by blending soils, sand, stabilized organic soil amendments, and other materials to produce planting soil.
- I. NAPT: North American Proficiency Testing Program. An SSSA program to assist soil-, plant-, and water-testing laboratories through interlaboratory sample exchanges and statistical evaluation of analytical data.

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- J. Organic Matter: The total of organic materials in soil exclusive of undecayed plant and animal tissues, their partial decomposition products, and the soil biomass; also called "humus" or "soil organic matter."
- K. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified as specified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- L. RCRA Metals: Hazardous metals identified by the EPA under the Resource Conservation and Recovery Act.
- M. SSSA: Soil Science Society of America.
- N. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- O. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.
- P. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil"; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- Q. USCC: U.S. Composting Council.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include test data substantiating that products comply with requirements.
 - 2. Include sieve analyses for aggregate materials.
 - 3. Material Certificates: For each type of imported soil and soil amendment and fertilizer before delivery to the site, according to the following:
 - a. Manufacturer's qualified testing agency's certified analysis of standard products.
 - b. Analysis of fertilizers, by a qualified testing agency, made according to AAPFCO methods for testing and labeling and according to AAPFCO's SUIP #25.
 - c. Analysis of nonstandard materials, by a qualified testing agency, made according to SSSA methods, where applicable.
- B. Samples: For each bulk-supplied material, **1-quart** volume of each in sealed containers labeled with content, source, and date obtained. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of composition, color, and texture.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For each testing agency.

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- B. Preconstruction Test Reports: For preconstruction soil analyses specified in "Preconstruction Testing" Article.
- C. Field quality-control reports.

1.6 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent, state-operated, or university-operated laboratory; experienced in soil science, soil testing, and plant nutrition; with the experience and capability to conduct the testing indicated; and that specializes in types of tests to be performed.
 - 1. Laboratories: Subject to compliance with requirements, provide testing by one of the following:
 - a. Auburn University Extension Service or similar
334-844-3958
aces.edu/soiltest
soiltest@auburn.edu
 - 2. Multiple Laboratories: At Contractor's option, work may be divided among qualified testing laboratories specializing in physical testing, chemical testing, and fertility testing.

1.7 SOIL-SAMPLING REQUIREMENTS

- A. General: Extract soil samples according to requirements in this article and after subgrade is established for the natural fields.
- B. Sample Collection and Labeling: Have samples taken and labeled by Contractor in presence of Architect:
 - 1. Number and Location of Samples: Minimum of **four** representative soil samples **from each natural field** for each soil to be used or amended for landscaping purposes.
 - 2. Procedures and Depth of Samples: Collect a representative blend of soil from 0-6" deep at each location and combine into one sample per field.
 - 3. Division of Samples: Split each sample into two, equal parts. Send half to the testing agency and half to Owner for its records.
 - 4. Labeling: Label each sample with the date, location keyed to a site plan or other location system, visible soil condition, and sampling depth.

1.8 TESTING REQUIREMENTS

- A. General: Perform tests on soil samples according to requirements in this article.

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- B. Physical Testing:
 - 1. Soil Texture: Soil-particle, size-distribution analysis by one of the following methods according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods":
 - a. Sieving Method: Report sand-gradation percentages for very coarse, coarse, medium, fine, and very fine sand; and fragment-gradation (gravel) percentages for fine, medium, and coarse fragments; according to USDA sand and fragment sizes.
 - b. Hydrometer Method: Report percentages of sand, silt, and clay.
- C. Fertility Testing: Soil-fertility analysis according to standard laboratory protocol, including the following:
 - 1. Percentage of organic matter.
 - 2. CEC, calcium percent of CEC, and magnesium percent of CEC.
 - 3. Soil reaction (acidity/alkalinity pH value).
 - 4. Nitrogen ppm.
 - 5. Phosphorous ppm.
 - 6. Potassium ppm.
 - 7. Presence and quantities of problem materials including salts and metals cited in the Standard protocol. If such problem materials are present, provide additional recommendations for corrective action.
- D. Organic-Matter Content: Analysis using loss-by-ignition method according to SSSA's "Methods of Soil Analysis - Part 3- Chemical Methods."
- E. Recommendations: Based on the test results, state recommendations for soil treatments and soil amendments to be incorporated to produce satisfactory planting soil suitable for healthy, viable plants indicated. Include, at a minimum, recommendations for nitrogen, phosphorous, and potassium fertilization, and for micronutrients.
 - 1. Fertilizers and Soil Amendment Rates: State recommendations in weight per 1000 sq. ft.
 - 2. Soil Reaction: State the recommended liming rates for raising pH or sulfur for lowering pH according to the buffered acidity or buffered alkalinity in weight per 1000 sq. ft.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and compliance with state and Federal laws if applicable.
- B. Bulk Materials:
 - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
 - 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.

3. Do not move or handle materials when they are wet or frozen.
4. Accompany each delivery of bulk fertilizers and soil amendments with appropriate certificates.

PART 2 - PRODUCTS

2.1 PLANTING SOILS SPECIFIED BY COMPOSITION

- A. General: Soil amendments, fertilizers, and rates of application specified in this article are guidelines that may need revision based on testing laboratory's recommendations after preconstruction soil analyses are performed.
- B. **Planting-Soil Type for Natural Turf Fields:** Imported, naturally formed soil from off-site sources and consisting of light brown, sandy loam, screened subsoil; and modified to produce viable planting soil.
 1. Sources: Take imported, unamended soil from sources that are naturally well-drained sites where topsoil occurs at least 4 inches deep, not from agricultural land, bogs, or marshes; and that do not contain undesirable organisms; disease-causing plant pathogens; or obnoxious weeds and invasive plants including, but not limited to, quackgrass, Johnsongrass, poison ivy, nutsedge, nimblewill, Canada thistle, bindweed, bentgrass, wild garlic, ground ivy, perennial sorrel, and brome grass.
 2. Additional Properties of Imported Soil before Amending: Soil reaction of **pH 6 to 7** and minimum of **6** percent organic-matter content, friable, and with sufficient structure to give good tilth and aeration.
 3. Unacceptable Properties: Clean soil of the following:
 - a. Unacceptable Materials: Concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
 - b. Unsuitable Materials: Stones, roots, plants, sod, clay lumps, and pockets of coarse sand that exceed a combined maximum of **8** percent by dry weight of the imported soil.
 - c. Large Materials: Stones, clods, roots, clay lumps, and pockets of coarse sand exceeding 1 inches in any dimension.
 4. Material:
 - a. Screened, Light brown, sandy subsoil.

2.2 FERTILIZERS

- A. Refer to Section 329200 "Lawns and Grasses"

PART 3 - EXECUTION

3.1 GENERAL

- A. Place planting soil and fertilizers according to requirements in other Specification Sections.
- B. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in planting soil.
- C. Proceed with placement only after unsatisfactory conditions have been corrected.

3.2 PLACING AND MIXING PLANTING SOIL OVER EXPOSED SUBGRADE

- A. General: Apply and mix unamended soil with amendments on-site to produce required planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
- B. Subgrade Preparation: Till subgrade to a minimum depth of **2 inches**. Remove stones larger than **1 inches** any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
- C. Mixing: Spread unamended soil to total depth of **4 inches** but not less than required to meet finish grades after mixing with amendments and natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet.
 - 1. Amendments: Apply soil amendments and fertilizer, if required, evenly on surface, and thoroughly blend them with unamended soil to produce planting soil.
 - a. Mix fertilizer with planting soil no more than seven days before planting.
- D. Compaction: Compact each blended lift of planting soil to **70** percent of maximum Standard Proctor density according to ASTM D698 and tested in-place.
- E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades as specified on drawings.

3.3 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Perform the following tests:
 - 1. Compaction: Test planting-soil compaction after placing each lift and at completion using a densitometer or soil-compaction meter calibrated to a reference test value based on laboratory testing according to ASTM D698. Space tests at no less than one for each 5000 sq. ft. of in-place soil or part thereof.

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2. See Section 014000 "Quality Requirements" for retesting and reinspecting requirements and Section 017300 "Execution" for requirements for correcting the Work.

- C. Soil will be considered defective if it does not pass tests.
- D. Prepare test reports.
- E. Label each sample and test report with the date, location keyed to a site plan or other location system, visible conditions when and where sample was taken, and sampling depth.

3.4 PROTECTION

- A. Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:
 - 1. Storage of construction materials, debris, or excavated material.
 - 2. Parking vehicles or equipment.
 - 3. Vehicle traffic.
 - 4. Foot traffic.
 - 5. Erection of sheds or structures.
 - 6. Impoundment of water.
 - 7. Excavation or other digging unless otherwise indicated.
- B. If planting soil or subgrade is overcompacted, disturbed, or contaminated by foreign or deleterious materials or liquids, remove the planting soil and contamination; restore the subgrade as directed by Architect and replace contaminated planting soil with new planting soil.

3.5 CLEANING

- A. Protect areas adjacent to planting-soil preparation and placement areas from contamination. Keep adjacent paving and construction clean and work area in an orderly condition.
- B. Remove surplus soil and waste material including excess subsoil, unsuitable materials, trash, and debris and legally dispose of them off Owner's property unless otherwise indicated.
 - 1. Dispose of excess subsoil and unsuitable materials on-site where directed by Owner.

END OF SECTION 329113

SECTION 329200 - PLAYING FIELD SODDING

PART 1 PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1-Specification sections, apply to work of this section.

1.2 DESCRIPTION

- A. This section covers furnishing, delivery, installation of turf sod, and maintenance during turf establishment in accordance with this specification at the locations indicated on the Drawings.
- B. Sod installation includes, but is not limited to, the following:
1. Installation of turfgrass sod in designated areas.
 2. Maintenance of sod during grow-in and turf establishment unless otherwise noted by the Owner or Owner's Representative.
- C. Related sections include:
1. Included Division 2 through Division 16 technical specifications.

1.3 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.
1. American Sod Producers Association (ASPA)
 2. ASPA GSS 1988 Guideline Specifications for Sodding
 3. Commercial Item Descriptions (CID)
 4. CID A-A-1909 Fertilizer
 5. Department of Agriculture (DOA) DOA FSA 1985 Federal Seed Act Rules DOA SSIR 1984 Soil Survey Laboratory Methods and Procedures for Collecting Soil Samples

1.4 SUBMITTALS

- A. Furnish three (3) copies of manufacturer literature, samples, certifications, or laboratory analytical data for the following items.
1. Sod:
 - a. Address of grower
 - b. Location of growing field.
 - c. Seed Certification
 2. Fertilizer (certification or laboratory analytical data).

1.5 JOB CONDITIONS

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- A. This Contract shall include harvesting (cutting) the turf at the approved sod farm, transporting the turf to the site, and installing the turf at the site. All supplied turf shall meet the quality requirements of this specification.
- B. Schedule: Installed turfgrass sod shall be mature and suitable for foot traffic per date to be established by the Owner. See this Section for "Acceptance of Turf" for additional parameters.

PART 2 PRODUCTS

1.1 SOD FOR FIELDS

- A. Turfgrass Sod (for Playing Field areas):
 - 1. Sod shall be nursery grown variety as specified on drawings.
 - 2. Sod may be harvested and arrive on-site netted, but the netting shall be removed during installation of the sod.
 - 3. Machine cut sod at a uniform thickness of 0.75 inches within a tolerance of ± 0.25 inches, excluding top growth and thatch.
 - 4. Sod shall be composed of healthy living stems and roots providing a heavy and dense sod not less than 10 months old that is mature and free of weeds and disease and insects.

1.2 QUALITY FACTORS

- A. Uniformity of cut is required. Sod thickness shall be 0.75" across the width and length of each section with a maximum deviation of 1/4". Thickness and width shall be kept to strict dimensions. Broken strips, irregularly shaped pieces, and torn or uneven ends will be rejected. Edges shall be cut at 90-degree angles to provide for tight fit during installation.
- B. Quality Control: Sod shall be subject to inspection and approval by Owner's Representative at place of growth and upon delivery for conformity to specifications. Such approvals shall not impair the right of inspection and rejection during progress of the Work. Owner may reject sod not meeting specification as determined by the Owner's sole judgment.
- C. Mowing height: Sod shall be mowed and maintained uniformly at a height of 1.50 to 2.00 inches depending on environmental conditions for a period of 4 weeks prior to harvesting. Before shipping, sod shall be groomed.
- D. Diseases and soil borne insects: State Nursery and/or Plant Material laws require that all soil entering Interstate Commerce be inspected and approved for sale.
- E. Weeds: Cultivated sod shall be free from objectionable grassy and broadleaf weeds. Sod will not be acceptable if it contains any weeds or if it is not true to species.
- F. Moisture content: Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect survival of the sod.

1.3 FERTILIZER

- 1. Refer to Playing Field Construction Section 329100

PART 3 – EXECUTION

1.1 HARVESTING TURF MATERIALS

- A. Sod must be cut in full 42” to 48” width rolls minimum fielding lengths that can be transported and installed.
- B. The Contractor shall be solely responsible for the safe transportation of turf to the site and condition upon arrival. Turf damaged, dehydrated or abused during transit or storage will be rejected.
- C. Coordinate harvesting and planting operations to prevent exposure of sod to the sun for more than 8 hours.

1.2 INSTALLATION OF SOD

- A. Prior to laying of any sod, the topsoil must be completely settled and smoothed to the required grades for sod installation. The topsoil surface should be scarified and loosened prior to placement of amendments and installation of sod.
- B. Sod exhibiting heat or drought stress and not installed within 36 hours after cutting will be rejected. Sod cutting and shipping shall be coordinated with the sod grower. Moisten prepared areas before sod installation to a depth of 4”.
- C. When placing sod, the Contractor shall use great care so as not to disturb the finished grades of the topsoil. Contractor will make provisions to avoid rutting of the topsoil. Equipment used to lay sod shall have tracks or large floatation tires. Equipment shall not allowed to drive over laid sod.
- D. The first row of sod should, if possible, be laid in a straight line with subsequent rows placed parallel and tightly against one another. Lateral joints shall be staggered 36 inches minimum to promote more uniform growth and strength. Do not stretch or overlap sod pieces. All joints are butted tight in order to prevent voids. Lap ends of sod rolls 6" and cut new tight joint.
- E. Sod laid adjacent to hard surfaces shall be laid 1/2" above the tops of adjacent surfaces.
- F. Water and Rolling: The sod shall be watered immediately after installation to prevent drying during progress of the work. The Contractor shall have adequate equipment available to water the sod as specified herein. As sod installation is completed in any one section, the entire area shall be thoroughly irrigated to a one-inch depth below the new sod pad. After a short drying period, the sod should be rolled to firm the sod pad.

1.3 TURF MAINTENANCE

- A. Current cultural management practices may be modified in accordance with tissue test results or environmental conditions.

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- B. The Owner will not assume maintenance of the turf until after Substantial Completion and after the turf has been inspected and approved by the Owner's Representative. Until that time, the Contractor shall perform all maintenance.
- C. The Contractor shall be responsible for the performance and operation of the turfgrass areas during the construction, maintenance period and until final acceptance. The Contractor shall keep technically qualified personnel on-site and maintain adequate labor, equipment and supplies in reserve to immediately repair the system or components in the event of any deficiency or failure during the interim maintenance period.
- D. The Contractor shall provide all operations necessary to maintain the field through the date of acceptance. The following list of items represents the minimum operations necessary to maintain the turfgrass lawn areas.
- E. Mowing: Cutting height will be determined by environmental conditions, condition of sod, and time of year or activities. Turf height will be maintained using only sharp, clean equipment capable of cutting heights of 1.50 to 2.25 inches. Not more than 1/3 of the grass leaf will be removed by the initial cutting or subsequent cuttings. Turf will be maintained to a neat appearance.
- F. Weed and Pest Control: The Contractor is to maintain the turf free from disease and infestation. Required treatments will be made according to the needs of the turf as determined by the Owner's Representative. Comply with applicable requirements of Federal, State, and Local laws, regulations and codes having jurisdiction over chemical treatments. Apply a brown patch preventative fungicide as per manufacturer's recommendations either at the sod farm or after sod installation.

1.4 ACCEPTANCE OF TURF

- A. The Owner's Representative will inspect the turf. Final acceptance will follow Owner's Representative's final approval of the punch list and the following criteria:
 - 1. Turf has rooted into the Topsoil to a depth of 1 inch.
 - 2. The turfgrass surface has a smooth appearance.
 - 3. Turf is free of dead or bare spots in excess of 3 square inches.

END OF SECTION 329200

SECTION 02230 - SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Removing existing vegetation.
 - 2. Clearing and grubbing.
 - 3. Stripping and stockpiling topsoil.
 - 4. Removing above- and below-grade site improvements.
 - 5. Disconnecting, capping or sealing, and removing site utilities.
 - 6. Temporary erosion- and sedimentation-control measures.

1.3 DEFINITIONS

- A. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- B. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.
- D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 MATERIAL OWNERSHIP

- A. Except for stripped topsoil and other materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 INFORMATIONAL SUBMITTALS

- A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
 - 1. Use sufficiently detailed photographs or videotape.
- B. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE

- A. Preinstallation Conference: Conduct conference at Project site.

1.7 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Utility Locator Service: Notify One Call for area where Project is located before site clearing.
- C. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.
- D. Soil Stripping, Handling, and Stockpiling: Perform only when the topsoil is dry or slightly moist.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 02300 "Earthwork."
 - 1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.
- B. Antirust Coating: Fast-curing, lead- and chromate-free, self-curing, universal modified-alkyd primer complying with MPI #79, Alkyd Anticorrosive Metal Primer or SSPC-Paint 20 or SSPC-Paint 29 zinc-rich coating.

1. Use coating with a VOC content of 420 g/L (3.5 lb/gal.) or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Protect existing site improvements to remain from damage during construction.
 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion and sedimentation control Drawings and requirements of authorities having jurisdiction.
- B. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 EXISTING UTILITIES

- A. Locate, identify, utilities in the construction area. Notify the Engineer immediately on any discrepancies and conflicts.

3.4 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 2. Grind down stumps and remove roots, obstructions, and debris to a depth of 18 inches below exposed subgrade.
 3. Remove tree branches and dispose of off-site.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density equal to adjacent original ground.

3.5 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil in a manner to prevent intermingling with underlying subsoil or other waste materials.
 1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects more than 2 inches in diameter; trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
 1. Limit height of topsoil stockpiles to 72 inches.
 2. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity required for landscaped areas.

3.6 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.
 2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 02230

SECTION 02300 - EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Preparing subgrades for slabs-on-grade, walks, pavements, turf and grasses, and plants.
2. Excavating and backfilling for buildings and structures.
3. Subbase course for concrete walks and pavements.
4. Subbase course and base course for asphalt paving.
5. Subsurface drainage backfill for walls and trenches.
6. Excavating and backfilling trenches for utilities and pits for buried utility structures.
7. Excavating well hole to accommodate elevator-cylinder assembly.
8. Preparing and grading for synthetic playing field areas sub-grade.

- B. Related Sections:

1. Section 02230 "Site Clearing" for site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements and utilities.

1.3 UNIT PRICES

- A. Refer to Section 01270 "Unit Prices" for a list of Unit Prices for work in addition to the contract documents.

1.4 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.
- C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
 - 2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
 - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.
- F. Fill: Soil materials used to raise existing grades.
- G. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- H. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- I. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
- J. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of the following manufactured products required:
 - 1. Geotextiles.
 - 2. Controlled low-strength material, including design mixture.
 - 3. Warning tapes.
- B. Samples for Verification: For the following products, in sizes indicated below:
 - 1. Geotextile: 12 by 12 inches.
 - 2. Warning Tape: 12 inches long; of each color.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified testing agency.
- B. Material Test Reports: For each on-site and borrow soil material proposed for fill and backfill as follows:

1. Classification according to ASTM D 2487.
 2. Laboratory compaction curve according to ASTM D 698.
- C. Preexcavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by earth moving operations. Submit before earth moving begins.
- D. Quality assurance verification of the sub-grade prior to sub-base materials installation, should include the following:
1. Conformance Survey of Sub-Grade: The Contractor shall perform a conformance survey by a licensed surveyor, before any placement of the drainage stone, on a 25-foot grid over the sub-grade of the entire playing field. Owner's Representative will require three (3) working days to review survey. After review, the survey will be returned to Contractor with areas out of tolerance noted for correction. Contractor will be required to correct areas out of tolerance and certify that corrections have been made prior to base drainage stone.
 2. Tolerance for Sub-Grade: Sub-grade shall be verified using laser-operation survey instruments. Subgrade must be within 1/4 of an inch plus or minus from the elevations shown on the plans. In addition, the sub-grade shall be measured so that no point within the 25-foot grid deviates more than 1/4 of an inch from any other point within the 25-foot grid.

1.7 QUALITY ASSURANCE

- A. Preexcavation Conference: Conduct conference at Project site.

1.8 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Utility Locator Service: Notify "One Call" for area where Project is located before beginning earth moving operations.
- C. Do not commence earth moving operations until temporary erosion- and sedimentation-control measures, specified in Section 02230 "Site Clearing," are in place.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: As defined within the geotechnical report.
- C. Unsatisfactory Soils: As defined within the geotechnical report.
 - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Subbase Material: ALDOT Section 230 Modified Roadbed.
- E. Base Course: ALDOT Section 825 Crushed Aggregate Base – Type A or B.
- F. Structural Fill: As defined within the geotechnical report.
- G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.
- H. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch sieve and 0 to 5 percent passing a No. 4 sieve.
- I. Sand: ASTM C 33; fine aggregate.
- J. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

2.2 GEOTEXTILES

- A. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
 - 1. Survivability: Class 2; AASHTO M 288.
 - 2. Grab Tensile Strength: 157 lbf; ASTM D 4632.
 - 3. Sewn Seam Strength: 142 lbf; ASTM D 4632.
 - 4. Tear Strength: 56 lbf; ASTM D 4533.
 - 5. Puncture Strength: 56 lbf; ASTM D 4833.
 - 6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
 - 7. Permittivity: 0.2 per second, minimum; ASTM D 4491.
 - 8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

- B. Separation Geotextile: Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Survivability: Class 2; AASHTO M 288.
2. Grab Tensile Strength: 247 lbf; ASTM D 4632.
3. Sewn Seam Strength: 222 lbf; ASTM D 4632.
4. Tear Strength: 90 lbf; ASTM D 4533.
5. Puncture Strength: 90 lbf; ASTM D 4833.
6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
7. Permittivity: 0.02 per second, minimum; ASTM D 4491.
8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

2.3 CONTROLLED LOW-STRENGTH MATERIAL

- A. Controlled Low-Strength Material: Self-compacting, flowable concrete material produced from the following:

1. Portland Cement: ASTM C 150, Type I.
2. Fly Ash: ASTM C 618, Class C or F.
3. Normal-Weight Aggregate: ASTM C 33, 3/4-inch nominal maximum aggregate size.
4. Water: ASTM C 94.
5. Air-Entraining Admixture: ASTM C 260.

- B. Produce conventional-weight, controlled low-strength material with 80-psi compressive strength when tested according to ASTM C 495.

2.4 GEOFOAM (Not Used)

2.5 ACCESSORIES

- A. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:

1. Red: Electric.
2. Yellow: Gas, oil, steam, and dangerous materials.
3. Orange: Telephone and other communications.
4. Blue: Water systems.
5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 EXPLOSIVES

- A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.

3.5 EXCAVATION FOR SYNTHETIC PLAYING FIELDS

- A. Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1/4 inch over 25 feet. Do not disturb bottom of excavations intended for bearing surface. Grades shall be uniformly sloped as indicated on the plans. A conformance survey will be required prior to acceptance and further work being authorized to proceed.

3.6 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
 - 1. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch. Do not disturb bottom of excavations intended as bearing surfaces.

3.7 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.8 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
 - 1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.
 - 1. Clearance: As indicated.
- C. Trench Bottoms: Excavate trenches 6 inches deeper than bottom of pipe and conduit elevations to allow for bedding course. Hand-excavate deeper for bells of pipe.
 - 1. Excavate trenches deeper per geotechnical engineer's recommendation in areas of rock or other unyielding bearing material to allow for bedding course.

3.9 EXCAVATION FOR ELEVATOR CYLINDER (Not Used)

3.10 SUBGRADE INSPECTION

- A. Notify Engineer when excavations have reached required subgrade.
- B. If Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade below pavements with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
 2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed.
- D. Refer to Section 334600 Synthetic Turf Base Construction for additional requirements for approval of sub-grade.
- E. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
- F. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

3.11 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 1500 psi, may be used when approved by Engineer.
1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Engineer.

3.12 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.13 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
 2. Surveying locations of underground utilities for Record Documents.
 3. Testing and inspecting underground utilities.
 4. Removing concrete formwork.
 5. Removing trash and debris.
 6. Removing temporary shoring and bracing, and sheeting.
 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.14 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Trenches under Footings: Backfill trenches excavated under footings and within 18 inches of bottom of footings with structural fill; fill with concrete to elevation of bottom of footings. Concrete is specified in Section 03300 "Cast-in-Place Concrete".
- D. Backfill voids with structural soil while removing shoring and bracing.
- E. Place and compact initial backfill of structural fill, free of particles larger than 1 inch in any dimension, to a height of 12 inches over the pipe or conduit.
 - 1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- F. Place and compact final backfill of structural fill to final subgrade elevation.
- G. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.15 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
 - 1. Under grass and planted areas, use satisfactory soil material.
 - 2. Under walks and pavements, use structural fill.
 - 3. Utility Trenches under pavements or buildings, use structural fill.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.16 GEOFOAM FILL (Not Used)

3.17 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.

2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.18 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 10 inches in loose depth for material compacted by heavy compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of the Modified Proctor maximum dry density according to ASTM D 1557:
 1. Under structures and pavements: 95 percent. The top 12 inches of fill beneath the building pad and flexible pavement areas should be compacted to 98 percent.
 2. Under turf or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 percent.
 3. For utility trenches, compact each layer of initial and final backfill soil material at 95 percent. Beneath pavement areas, the top 12 inches of backfill should be compacted to at least 98 percent.
 4. Under Synthetic Playing Field areas: compact the top 6 inches below sub-grade and each layer of backfill or fill material at 95 percent maximum dry density OR as set forth by the Synthetic Turf Surface manufacturer.

3.19 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 1. Provide a smooth transition between adjacent existing grades and new grades.
 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 1. Turf or Unpaved Areas: Plus or minus 1 inch.
 2. Walks: Plus or minus 1 inch.
 3. Pavements: Plus or minus 1/2 inch.

3.20 SUBSURFACE DRAINAGE

- A. Subdrainage Pipe: Specified in Section 02630 "Storm Drainage."

- B. Subsurface Drain: Place subsurface drainage geotextile around perimeter of subdrainage trench. Place a 4-inch (100-mm) course of filter material on subsurface drainage geotextile to support subdrainage pipe. Encase subdrainage pipe in a minimum of 14 inches (350 mm) of filter material, placed in compacted layers 6 inches (150 mm) thick, and wrap in subsurface drainage geotextile, overlapping sides and ends at least 6 inches (150 mm).
 - 1. Compact each filter material layer with a minimum of two passes of a plate-type vibratory compactor.

3.21 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

- A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:
 - 1. Place base course material over subbase course under hot-mix asphalt pavement.
 - 2. Shape subbase course and base course to required crown elevations and cross-slope grades.
 - 3. Place subbase course and base course 6 inches or less in compacted thickness in a single layer.
 - 4. Place subbase course and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
 - 5. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 98 and 100 percent of maximum dry unit weight according to ASTM D 698 respectfully.

3.22 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE (Not Used)

3.23 FIELD QUALITY CONTROL

- A. Testing Agency: Contractor will engage a qualified geotechnical engineering testing agency to perform tests and inspections.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
- C. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
 - 1. Pavement Areas: One density test every 500 linear feet per lift for roadway sections or 10,000 square feet per lift for parking lots or two tests per lift, whichever is greater.
 - 2. Trench Backfill: One density test every 75 linear feet per lift or two tests per lift, whichever is greater.
 - 3. Synthetic Playing Field Areas: At sub-grade and at each compacted fill and backfill layer, perform at least one field in-place density test for every 10,000 sq. ft. or less of

playing field, but in no case fewer than three tests, per layer and per day of fill/backfill placement.

- D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.24 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.25 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 02300

SECTION 024100 - SITE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUBMITTALS

- A. The procedure proposed for the accomplishment of salvage and demolition work shall be submitted for approval. The procedure shall provide for safe conduct of the work, careful removal and disposition of materials specified to be salvaged, protection of property, which is to remain undisturbed, coordination with other work in progress. The procedure shall include a description of the method and equipment to be used for the operation, and the sequence of the operation.

1.3 GENERAL REQUIREMENTS

- A. The work includes demolition or removal of construction indicated on the drawings including but not limited to infield materials and existing grass outfields.
- B. The assumed method of demolition of the turf areas is herbicide treatment and tilling of existing grass. Herbicide shall be used per manufacturer's recommendations and per all environmental regulations. Sufficient time shall lapse after applying herbicide to allow visual evidence the application has eradicated all existing vegetation. Herbicide shall be reapplied if green and living vegetation remains. **If the Contractor decides to demolish the turf area with a different method other than assumed above, the Contractor shall notify the Landscape Architect before any demolition work occurs.**
- C. All materials resulting from demolition work, except as indicated or specified otherwise, shall become the property of the Contractor at the option of the Owner and shall be removed from the limits of the Owner's property. Rubbish and debris shall be removed from the property daily unless otherwise directed so as to not allow accumulation thereof. Materials that cannot be removed daily shall be stored in areas specified by the Owner.

1.4 DUST CONTROL

- A. The amount of dust resulting from demolition shall be controlled to prevent the spread of dust and to avoid creation of a nuisance in the surrounding area. Use of water will only be permitted when it will not result in, or create, hazardous or objectionable conditions such as ice, flooding and pollution.

1.5 PROTECTION

- A. Protection of Existing Work: Before beginning any cutting or demolition work, the Contractor shall carefully survey the existing work and examine the drawings and specifications to determine the extent of the work. The Contractor shall take all necessary precautions to insure against damage to existing work to remain in place, and any damage to such work shall be repaired or replaced as approved by the Engineer at no additional cost to the Owner. The Contractor shall

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carefully coordinate the work of this section with all other work and construct and maintain shoring, bracing and supports, as required. The Contractor shall insure that structural elements are not overloaded and be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal, or demolition work performed under any part of this contract.

1.6 AVAILABILITY OF WORK AREAS

- A. The area in which demolition work is to be accomplished will be available in accordance with a mutually agreeable schedule to be determined by the Landscape Architect and the Contractor.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

3.1 DISPOSITION OF MATERIAL

- A. Title to Materials: Title to all materials and equipment to be demolished, unless otherwise shown, is vested in the Contractor upon receipt of notice to proceed. The Owner will not be responsible for the condition, loss or damage to such property after notice to proceed.
- B. Material for Contractor Salvage: Salvage materials shall be removed from the Owner's property before completion of the Contract. Material for salvage shall not be sold on the site.

3.2 CLEAN-UP

- A. Debris Control: Debris shall be removed and transported in a manner as to prevent spillage on streets or adjacent areas.
- B. Clean up of debris and sediment shall be performed daily at construction entrance and asphalt entry road.
- C. Regulations: Local regulations regarding hauling and disposal apply.

END OF SECTION 024100

SECTION 02630 - STORM DRAINAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Pipe and fittings.
 - 2. Stormwater inlets.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings:
 - 1. Stormwater inlets: Include plans, elevations, sections, details, frames, and covers.

1.4 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not store plastic manholes, pipe, and fittings in direct sunlight.
- B. Protect pipe, pipe fittings, and seals from dirt and damage.
- C. Handle stormwater inlets according to manufacturer's written rigging instructions.

PART 2 - PRODUCTS

2.1 PE PIPE AND FITTINGS

- A. Corrugated PE Drainage Pipe and Fittings NPS 3 to NPS 10: AASHTO M 252M, Type S, with smooth waterway for coupling joints.

1. Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with tube and fittings.
 2. Solid Pipe
- B. Corrugated PE Pipe and Fittings NPS 12 to NPS 60 (DN 300 to DN 1500): AASHTO M 294M, Type S, with smooth waterway for coupling joints.
1. Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with pipe and fittings.
 2. Soiltight Couplings: AASHTO M 294M, corrugated, matching pipe and fittings.

2.2 CONCRETE

- A. General: Cast-in-place concrete according to ACI 318, ACI 350/350R (ACI 350M/350RM), and the following:
1. Cement: ASTM C 150, Type II.
 2. Fine Aggregate: ASTM C 33, sand.
 3. Coarse Aggregate: ASTM C 33, crushed gravel.
 4. Water: Potable.
- B. Portland Cement Design Mix: 3000 psi minimum, with 0.45 maximum water/cementitious materials ratio.
1. Reinforcing Fabric: ASTM A 185, steel, welded wire fabric, plain.
 2. Reinforcing Bars: ASTM A 615, Grade 60 deformed steel.

2.3 WEIR INLET (Not Used)

2.4 DROP INLETS (Not Used)

2.5 CATCH BASIN (WEIR INLET)

- A. Designed Precast Concrete Catch Basins: ASTM C 913, precast, reinforced concrete; designed according to ASTM C 890 for A-16 (ASSHTO HS20-44), heavy-traffic, structural loading; of depth, shape, and dimensions indicated, with provision for joint sealants.
1. Joint Sealants: ASTM C 990, bitumen or butyl rubber.
 2. Grade Rings: Include two or three reinforced-concrete rings, of 6- to 9-inch total thickness, that match 24-inch-diameter frame and grate.
 3. Steps: ASTM A 615, deformed, 1/2-inch steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from floor of catch basin to finished grade is less than 48 inches.

B. Manhole Frames and Covers:

1. Description: Ferrous; 24-inch (610-mm) ID by 7- to 9-inch (175- to 225-mm) riser with 4-inch- (102-mm-) minimum width flange and 26-inch- (660-mm-) diameter cover. Include indented top design with lettering cast into cover, using wording equivalent to "STORM SEWER."
2. Material: ASTM A 536, Grade 60-40-18 ductile iron unless otherwise indicated.

2.6 OUTLET CONTROL STRUCTURE (Not Used)

2.7 PIPE OUTLETS (Not Used)

PART 3 - EXECUTION

3.1 EARTHWORK

- A. Excavation, trenching, and backfilling are specified in Section 02300 "Earthwork."

3.2 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
- C. Install storm structures for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.
- D. Install gravity-flow, nonpressure drainage piping according to the following:
1. Install piping pitched down in direction of flow.
 2. Install PE corrugated sewer piping according to ASTM D 2321.

3.3 PIPE JOINT CONSTRUCTION

- A. Join gravity-flow, nonpressure drainage piping according to the following:
1. Join corrugated PE piping according to ASTM D 3212 for push-on joints.
 2. Join reinforced-concrete sewer piping according to ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints.

- B. Join force-main pressure piping according to the following:
 - 1. Join PVC water-service piping according to ASTM D 2855 for solvent-cemented joints.

3.4 CLEANOUT INSTALLATION (Not Used)

3.5 MANHOLE INSTALLATION

- A. Construct catch basins to sizes and shapes indicated.
- B. Set frames, grates, and covers to elevations indicated.

3.6 CONCRETE PLACEMENT

- A. Place cast-in-place concrete according to ACI 318.

3.7 CONNECTIONS

- A. Make connections to existing piping and underground manholes.
 - 1. Make branch connections into existing underground manholes and structures by cutting into existing unit and creating an opening large enough to allow 3 inches (76 mm) of concrete to be packed around entering connection. Cut end of connection pipe passing through structure wall to conform to shape of and be flush with inside wall unless otherwise indicated. On outside of pipe, manhole, or structure wall, encase entering connection in 6 inches (150 mm) of concrete for minimum length of 12 inches (300 mm) to provide additional support of collar from connection to undisturbed ground.
 - a. Use concrete that will attain a minimum 28-day compressive strength of 3000 psi (20.7 MPa) unless otherwise indicated.
 - b. Use epoxy-bonding compound as interface between new and existing concrete and piping materials.
 - 2. Protect existing piping, manholes, and structures to prevent concrete or debris from entering while making tap connections. Remove debris or other extraneous material that may accumulate.

3.8 IDENTIFICATION

- A. Materials and their installation are specified in Section 02300 "Earthwork." Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.
 - 1. Use warning tape over ferrous piping.

3.9 FIELD QUALITY CONTROL

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.
 - 1. Submit separate reports for each system inspection.
 - 2. Defects requiring correction include the following:
 - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
 - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
 - c. Damage: Crushed, broken, cracked, or otherwise damaged piping.
 - d. Infiltration: Water leakage into piping.
 - e. Exfiltration: Water leakage from or around piping.
 - 3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
 - 4. Reinspect and repeat procedure until results are satisfactory.
- B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
 - 1. Do not enclose, cover, or put into service before inspection and approval.
 - 2. Test completed piping systems according to requirements of ALDOT.
 - 3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
 - 4. Submit separate report for each test.
- C. Test failures constitute defects that must be repaired.
- D. Replace defective piping using new materials, and repeat testing until testing is within allowances specified.

3.10 CLEANING

- A. Clean interior of piping of dirt and superfluous materials. Flush with potable water.

END OF SECTION 02630

SECTION 02751 - CEMENT CONCRETE PAVEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Curbs and gutters.
- 2. Walks.

- B. Related Sections:

- 1. Section 02764 "Pavement Joint Sealants" for joint sealants in expansion and contraction joints within concrete paving and in joints between concrete paving and asphalt paving or adjacent construction.

1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, and ground granulated blast-furnace slag.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

- B. Other Action Submittals:

- 1. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified ready-mix concrete manufacturer.

- B. Material Certificates: For the following, from manufacturer:

- 1. Cementitious materials.

2. Steel reinforcement and reinforcement accessories.
3. Admixtures.
4. Curing compounds.
5. Applied finish materials.
6. Epoxy adhesive.
7. Joint fillers.

C. Material Test Reports: For each of the following:

1. Aggregates. Include service-record data indicating absence of deleterious expansion of concrete due to alkali-aggregate reactivity.

D. Field quality-control reports.

1.6 QUALITY ASSURANCE

A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94 requirements for production facilities and equipment.

B. ACI Publications: Comply with ACI 301 unless otherwise indicated.

C. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to concrete paving, including but not limited to, the following:
 - a. Concrete mixture design.
 - b. Quality control of concrete materials and concrete paving construction practices.
2. Require representatives of each entity directly concerned with concrete paving to attend, including the following:
 - a. Contractor's superintendent.
 - b. Independent testing agency responsible for concrete design mixtures.
 - c. Concrete paving subcontractor.

1.7 PROJECT CONDITIONS

A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

PART 2 - PRODUCTS

2.1 FORMS

- A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.
 - 1. Use flexible or uniformly curved forms for curves with a radius of 100 feet or less. Do not use notched and bent forms.
- B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

2.2 STEEL REINFORCEMENT

- A. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from steel wire into flat sheets.
- B. Reinforcing Bars: ASTM A 615, Grade 60; deformed.
- C. Joint Dowel Bars: ASTM A 615, Grade 60 plain-steel bars. Cut bars true to length with ends square and free of burrs.
- D. Tie Bars: ASTM A 615, Grade 60, deformed.
- E. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified, and as follows:
 - 1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.

2.3 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of same type, brand, and source throughout Project:
 - 1. Portland Cement: ASTM C 150, gray portland cement Type I. Supplement with the following:
 - a. Fly Ash: ASTM C 618, Class C or Class F.
- B. Normal-Weight Aggregates: ASTM C 33, Class 4S, uniformly graded. Provide aggregates from a single source.
 - 1. Maximum Coarse-Aggregate Size: 3/4 inch nominal.

2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: Potable and complying with ASTM C 94.

D. Air-Entraining Admixture: ASTM C 260.

E. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.

1. Water-Reducing Admixture: ASTM C 494, Type A.

2.4 FIBER REINFORCEMENT

A. Synthetic Fiber: Monofilament or fibrillated polypropylene fibers engineered and designed for use in concrete paving, complying with ASTM C 1116/C 1116M, Type III, 1/2 to 1-1/2 inches (13 to 38 mm) long.

2.5 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. dry.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

D. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Anti-Hydro International, Inc.; A-H Curing Compound #2 DR WB.

b. ChemMasters; Safe-Cure Clear.

c. Conspec by Dayton Superior; [D.O.T. Resin Cure] [DSSCC Clear Resin Cure].

d. Dayton Superior Corporation; Day-Chem Rez Cure (J-11-W).

e. Edoco by Dayton Superior; [DSSCC Clear Resin Cure] [Resin Emulsion Cure V.O.C. (Type I)].

f. Euclid Chemical Company (The), an RPM company; Kurez W VOX.

g. Kaufman Products, Inc.; Thinfilm 420.

h. Lambert Corporation; AQUA KURE - CLEAR.

i. L&M Construction Chemicals, Inc.; L&M CURE R.

j. Meadows, W. R., Inc.; 1100-CLEAR SERIES.

k. Nox-Crete Products Group; Resin Cure E.

- l. SpecChem, LLC; PaveCure Rez.
- m. Symons by Dayton Superior; Resi-Chem Clear.
- n. Tamms Industries, Inc., Euclid Chemical Company (The); TAMMSCURE WB 30C.
- o. TK Products, Division of Sierra Corporation; [TK-2519 WB] [TK-2519 DC WB].
- p. Vexcon Chemicals Inc.; Certi-Vex Enviocure 100.

2.6 RELATED MATERIALS

- A. Joint Fillers: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork in preformed strips.
- B. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin capable of humid curing and bonding to damp surfaces; of class suitable for application temperature, of grade complying with requirements, and of the following types:
 1. Types IV and V, load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

2.7 CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to ACI 301, for each type and strength of normal-weight concrete, and as determined by either laboratory trial mixtures or field experience.
 1. Use a qualified independent testing agency for preparing and reporting proposed concrete design mixtures for the trial batch method.
 2. When automatic machine placement is used, determine design mixtures and obtain laboratory test results that meet or exceed requirements.
- B. Proportion mixtures to provide normal-weight concrete with the following properties:
 1. Compressive Strength (28 Days): Curbs and Sidewalks – 3000 psi
 2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.45.
 3. Slump Limit: General Use - 4 inches, Curbs and Sidewalks – 2 inches. Tolerance of plus or minus 1 inch.
- C. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:
 1. Air Content: 3-1/2 percent plus or minus 1.5 percent for 3/4-inch nominal maximum aggregate size.
- D. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.
- E. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.

2.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94. Furnish batch certificates for each batch discharged and used in the Work.
 - 1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.
- B. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.
 - 1. Completely proof-roll subbase in one direction. Limit vehicle speed to 3 mph.
 - 2. Proof-roll with a pneumatic-tired and loaded, 10-wheel, tandem-axle dump truck weighing not less than 15 tons, with a maximum weight of 45 tons.
 - 3. Correct subbase with soft spots and areas of pumping or rutting exceeding depth of 1/2 inch according to requirements in Section 02300 "Earthwork."
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove loose material from compacted subbase surface immediately before placing concrete.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.4 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.

- C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
- D. Install welded wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.
- E. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2-inch overlap of adjacent mats.

3.5 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
 - 1. When joining existing paving, place transverse joints to align with previously placed joints unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
 - 1. Continue steel reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of paving strips unless otherwise indicated.
 - 2. Provide tie bars at sides of paving strips where indicated.
 - 3. Butt Joints: Use epoxy bonding agent at joint locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
 - 4. Keyed Joints: Provide preformed keyway-section forms or bulkhead forms with keys unless otherwise indicated. Embed keys at least 1-1/2 inches into concrete.
 - 5. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.
 - 1. Locate expansion joints at intervals of 50 feet unless otherwise indicated.
 - 2. Extend joint fillers full width and depth of joint.
 - 3. Terminate joint filler not less than 1/2 inch or more than 1 inch below finished surface for joint sealant.
 - 4. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
 - 5. During concrete placement, protect top edge of joint filler with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows:
 - 1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/4-inch-wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.
 - a. Tolerance: Ensure that sawed joints are within 3 inches either way from centers of dowels.
 - 2. Doweled Contraction Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.
- E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/8-inch radius. Repeat tooling of edges after applying surface finishes.

3.6 CONCRETE PLACEMENT

- A. Before placing concrete, inspect and complete formwork installation, steel reinforcement, and items to be embedded or cast-in.
- B. Remove snow, ice, or frost from subbase surface and steel reinforcement before placing concrete. Do not place concrete on frozen surfaces.
- C. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- D. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
- E. Do not add water to concrete during delivery or at Project site. Do not add water to fresh concrete after testing.
- F. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- G. Consolidate concrete according to ACI 301 by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.
 - 1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.
- H. Screed paving surface with a straightedge and strike off.

- I. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.
- J. Curbs and Gutters: Use design mixture for automatic machine placement. Produce curbs and gutters to required cross section, lines, grades, finish, and jointing.
- K. Cold-Weather Placement: Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing, or low temperatures. Comply with ACI 306.1 and the following:
 - 1. When air temperature has fallen to or is expected to fall below 40 deg F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F and not more than 80 deg F at point of placement.
 - 2. Do not use frozen materials or materials containing ice or snow.
 - 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in design mixtures.
- L. Hot-Weather Placement: Comply with ACI 301 and as follows when hot-weather conditions exist:
 - 1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated in total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 - 2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
 - 3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

3.7 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Rfloat surface immediately to uniform granular texture.
 - 1. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch deep with a stiff-bristled broom, perpendicular to line of traffic.

3.8 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound or a combination of these as follows:
 - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
 - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover, placed in widest practicable width, with sides and ends lapped at least 12 inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears occurring during installation or curing period using cover material and waterproof tape.
 - 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas that have been subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating, and repair damage during curing period.

3.9 PAVING TOLERANCES

- A. Comply with tolerances in ACI 117 and as follows:
 - 1. Elevation: 1/2 inch.
 - 2. Thickness: Plus 3/8 inch, minus 1/4 inch.
 - 3. Surface: Gap below 10-foot- long, unlevelled straightedge not to exceed 1/2 inch.
 - 4. Alignment of Tie-Bar End Relative to Line Perpendicular to Paving Edge: 1/2 inch per 12 inches of tie bar.
 - 5. Lateral Alignment and Spacing of Dowels: 1 inch.
 - 6. Vertical Alignment of Dowels: 1/4 inch.
 - 7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Paving Edge: 1/4 inch per 12 inches of dowel.
 - 8. Joint Spacing: 3 inches.
 - 9. Contraction Joint Depth: Plus 1/4 inch, no minus.
 - 10. Joint Width: Plus 1/8 inch, no minus.

3.10 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
 - 1. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. or fraction thereof of each concrete mixture placed each day.
 - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 - 2. Slump: ASTM C 143; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
 - 3. Air Content: ASTM C 231, pressure method; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 - 4. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F and below and when it is 80 deg F and above, and one test for each composite sample.
 - 5. Compression Test Specimens: ASTM C 31; cast and laboratory cure one set of three standard cylinder specimens for each composite sample.
 - 6. Compressive-Strength Tests: ASTM C 39; test one specimen at seven days and two specimens at 28 days.
 - a. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at 28 days.
- C. Strength of each concrete mixture will be satisfactory if average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
- D. Test results shall be reported in writing to Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
- E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but will not be used as sole basis for approval or rejection of concrete.
- F. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Engineer.
- G. Concrete paving will be considered defective if it does not pass tests and inspections.

- H. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- I. Prepare test and inspection reports.

3.11 REPAIRS AND PROTECTION

- A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Engineer.
- B. Drill test cores, where directed by Engineer, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory paving areas with portland cement concrete bonded to paving with epoxy adhesive.
- C. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- D. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 02751

SECTION 02764 - PAVEMENT JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Cold-applied joint sealants.

- B. Related Sections:

- 1. Section 02741 "Asphalt Paving" for constructing joints between concrete and asphalt pavement.
 - 2. Section 02751 "Cement Concrete Pavement" for constructing joints in concrete pavement.

1.3 PRECONSTRUCTION TESTING

- A. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, Samples of materials that will contact or affect joint sealants.

- 1. Use manufacturer's standard test method to determine whether priming and other specific joint-preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
 - 2. Submit no fewer than eight pieces of each type of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
 - 3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
 - 4. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
 - 5. Testing will not be required if joint-sealant manufacturers submit joint-preparation data that are based on previous testing, not older than 24 months, of sealant products for compatibility with and adhesion to joint substrates and other materials matching those submitted.

1.4 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Certificates: For each type of joint sealant and accessory, from manufacturer.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for joint sealants.
- D. Preconstruction Compatibility and Adhesion Test Reports: From joint-sealant manufacturer, indicating the following:
 - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility with and adhesion to joint sealants.
 - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain each type of joint sealant from single source from single manufacturer.
- C. Product Testing: Test joint sealants using a qualified testing agency.
 - 1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.
- D. Preinstallation Conference: Conduct conference at Project site.

1.7 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer based on testing and field experience.
- B. Colors of Exposed Joint Sealants: Light Grey.

2.2 COLD-APPLIED JOINT SEALANTS

- A. Single-Component, Nonsag, Silicone Joint Sealant for Concrete: ASTM D 5893, Type NS.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Crafco Inc., an ERGON company; RoadSaver Silicone.
 - b. Dow Corning Corporation; 888.
 - c. Pecora Corporation; 301 NS.

2.3 JOINT-SEALANT BACKER MATERIALS

- A. General: Provide joint-sealant backer materials that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by joint-sealant manufacturer based on field experience and laboratory testing.
- B. Round Backer Rods for Cold-Applied Joint Sealants: ASTM D 5249, Type 3, of diameter and density required to control joint-sealant depth and prevent bottom-side adhesion of sealant.
- C. Backer Strips for Cold- and Hot-Applied Joint Sealants: ASTM D 5249; Type 2; of thickness and width required to control joint-sealant depth, prevent bottom-side adhesion of sealant, and fill remainder of joint opening under sealant.

2.4 PRIMERS

- A. Primers: Product recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.
- B. Joint Priming: Prime joint substrates where indicated or where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.
- B. Joint-Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install joint-sealant backings of kind indicated to support joint sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of joint-sealant backings.
 - 2. Do not stretch, twist, puncture, or tear joint-sealant backings.
 - 3. Remove absorbent joint-sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install joint sealants using proven techniques that comply with the following and at the same time backings are installed:
 - 1. Place joint sealants so they directly contact and fully wet joint substrates.
 - 2. Completely fill recesses in each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Nonsag Joint Sealants: Immediately after joint-sealant application and before skinning or curing begins, tool sealants according to the following requirements to form

smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint:

1. Remove excess joint sealant from surfaces adjacent to joints.
 2. Use tooling agents that are approved in writing by joint-sealant manufacturer and that do not discolor sealants or adjacent surfaces.
- F. Provide joint configuration to comply with joint-sealant manufacturer's written instructions unless otherwise indicated.

3.4 CLEANING

- A. Clean off excess joint sealant or sealant smears adjacent to joints as the Work progresses, by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

- A. Protect joint sealants, during and after curing period, from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately and replace with joint sealant so installations in repaired areas are indistinguishable from the original work.

3.6 PAVEMENT-JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Joints within cement concrete pavement.
1. Joint Location:
 - a. Expansion and isolation joints in cast-in-place concrete pavement.
 - b. Contraction joints in cast-in-place concrete slabs.
 - c. Other joints as indicated.
 2. Silicone Joint Sealant for Concrete: Single component, nonsag.
 3. Urethane Joint Sealant for Concrete: Multicomponent, pourable, traffic-grade.
 4. Joint-Sealant Color: Light Grey

END OF SECTION 02764

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.
- B. Including technical specification Division 1 through Division 48.

1.2 SUMMARY

- A. Section includes cast-in-place concrete for the following:
 - 1. Concrete Curbs surrounding proposed synthetic turf playing fields
 - 2. Concrete footings.
 - 3. Control, expansion and contraction joint devices
- B. Related Sections:
 - 1. Section 334600 Synthetic Turf Base Construction
 - 2. Section 323113 Chain Link Fences & Gates

1.3 REFERENCES

- A. American Concrete Institute:
 - 1. ACI 301 - Specifications for Structural Concrete.
 - 2. ACI 305 - Hot Weather Concreting.
 - 3. ACI 306.1 - Standard Specification for Cold Weather Concreting.
 - 4. ACI 308.1 - Standard Specification for Curing Concrete.
 - 5. ACI 318 - Building Code Requirements for Structural Concrete.

1.4 SUBMITTALS

- A. Section 013300 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit data on joint devices, attachment accessories and admixtures.
- C. Design Data:
 - 1. Submit concrete mix design for each concrete strength. Submit separate mix designs when admixtures are required for the following:
 - a. Hot and cold weather concrete work.
 - b. Air entrained concrete work.
 - 2. Identify mix ingredients and proportions, including admixtures.
- D. Concrete Testing - Contractor shall hire a third party testing company for all concrete testing. The City of Mobile is not responsible for testing or payment for testing.
- E. Manufacturer's Installation Instructions: Submit installation procedures and interface required with adjacent Work.

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1.5 CLOSEOUT SUBMITTALS

- A. Section 017000 - Execution Requirements: Closeout procedures.
- B. Project Record Documents: Accurately record actual locations of embedded utilities and components concealed from view in finished construction.

1.6 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 301.
- B. Conform to ACI 305 when concreting during hot weather.
- C. Conform to ACI 306.1 when concreting during cold weather.
- D. Acquire cement and aggregate from one source for Work.

PART 2 PRODUCTS

2.1 CONCRETE MATERIALS

- A. Cement: ASTM C150 Type I - Normal for all Exterior Concrete with a Maximum Water to Cement Ratio (w/c) of 0.45 and minimum f_c at 28 days of 4,500 psi with a maximum nominal aggregate size of $\frac{3}{4}$ ".
- B. Normal Weight Aggregates:
 - 1. Coarse Aggregate Maximum Size: 0.75 inches

2.2 ACCESSORIES

- A. Non-Shrink Grout: ASTM C1107, premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 4,500 psi in 28 days.

2.3 JOINT DEVICES AND FILLER MATERIALS

- A. Joint Filler: Asphalt impregnated fiberboard or felt, 1/4inch thick.

2.4 CONCRETE MIX

- A. Select proportions for concrete in accordance with ACI 318 trial mixtures or field experience.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 013000 - Administrative Requirements: Coordination and project conditions.
- B. Verify requirements for concrete cover over reinforcement.
- C. Verify anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with placing concrete.

3.2 PREPARATION

- A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent. Remove laitance, coatings, and unsound materials.
- B. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout.
- C. Remove debris and ice from formwork, reinforcement, and concrete substrates.

3.3 PLACING CONCRETE

- A. Place concrete in accordance with ACI 301.
- B. Notify testing laboratory and Architect/Engineer minimum 24 hours prior to commencement of operations.
- C. Ensure reinforcement, inserts, embedded parts, formed expansion and contraction joints, are not disturbed during concrete placement.
- D. Place joint filler in pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- E. Extend joint filler from bottom of slab to within 1/8 inch of finished slab surface.
- F. Install construction joint devices in coordination with pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- G. Install joint device anchors. Maintain correct position to allow joint cover to be flush with [floor] [and] [wall] finish.
- H. Install joint covers in longest practical length, when adjacent construction activity is complete.
- I. Deposit concrete at final position. Prevent segregation of mix.
- J. Place concrete in continuous operation for each panel or section determined by predetermined joints.

- K. Consolidate concrete.
- L. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- M. Place concrete continuously between predetermined expansion, control, and construction joints.
- N. Do not interrupt successive placement; do not permit cold joints to occur.

3.4 CURING AND PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

3.5 FIELD QUALITY CONTROL

- A. Section 014500 - Quality Requirements
- B. Perform field inspection and testing in accordance with ACI 318 and applicable codes. The Contractor is responsible for employing the testing laboratory and the testing laboratory is to provide the results directly to the Owner's Representative.
- C. Provide free access to Work and cooperate with appointed firm.
- D. Submit proposed mix design [of each class of concrete] to [inspection and] testing firm for review prior to commencement of Work.
- E. Concrete Inspections:
 - 1. Continuous Placement Inspection: Inspect for proper installation procedures.
 - 2. Periodic Curing Inspection: Inspect for specified curing temperature and procedures.
- F. Strength Test Samples:
 - 1. Sampling Procedures: ASTM C172.
 - 2. Sample concrete and make one set of cylinders for every 150 cu yds or less of each class of concrete placed each day and for every 5,000 sf of surface area for slabs.
 - 3. When volume of concrete for any class of concrete would provide less than 5 sets of cylinders, take samples from five randomly selected batches, or from every batch when less than 5 batches are used.
 - 4. Make one additional cylinder during cold weather concreting, and field cure.
- G. Field Testing:
 - 1. Slump Test Method: ASTM C143/C143M.
 - 2. Air Content Test Method: [ASTM C173/C173M] [ASTM C231].
 - 3. Temperature Test Method: ASTM C1064/C1064M.
 - 4. Measure slump and temperature for each compressive strength concrete for each truck.

5. Measure air content in air entrained concrete for each compressive strength concrete for each truck.

H. Cylinder Compressive Strength Testing:

1. Test Method: ASTM C39.
2. Test Acceptance: In accordance with ACI 318 and applicable codes.

I. Core Compressive Strength Testing:

1. Sampling and Testing Procedures: ASTM C42/C42M.
2. Test Acceptance: In accordance with ACI 318 and applicable codes.
3. Drill three cores for each failed strength test from concrete represented by failed strength test.

3.6 PATCHING

- A. Allow Architect/Engineer to inspect concrete surfaces immediately upon removal of forms.
- B. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Architect/Engineer upon discovery.

3.7 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by Architect/Engineer.
- C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect/Engineer for each individual area.

END OF SECTION 033000

SECTION 116833 – ATHLETIC FIELD EQUIPMENT

PART 1 GENERAL

1.01 WORK INCLUDED

A. Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. Baseball Foul Poles
2. Home Plate & Anchor
3. Baseball Base Anchors & Bases
4. Pitching Rubber & Anchor
5. Polytube Fence Cap

1.02 RELATED WORK

A. Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:

1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
2. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
3. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete and Asphalt

1.03 REFERENCES

A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. American Sports Builders Association (ASBA)
3. Manufacturer's Data and Recommended Installation Requirements

1.04 SUBMITTALS

A. Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives review.

B. Shop Drawings

1. Provide drawings of the manufacturers recommended installation and engineered foundation requirements prior to actual field installation work, for Architects or Owners representatives review.
2. **Provide engineered footing design by a Alabama Licensed Engineer for Architects or Owners review and records for foul poles & batting cage frame.**

1.05 QUALITY ASSURANCE

- A. Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

1.06 PRODUCT DELIVERY AND STORAGE

- A. Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

PART 2 PRODUCTS

2.01 Plate Mount High School Baseball Foul Pole & Accessories

A. MODEL:

1. FP630PL Plate Mount Baseball Foul Pole as manufactured and/or Supplied by:

Sportsfield Specialties, Inc.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
f. 607-746-8481
www.sportsfieldspecialties.com
(Basis of Design)

OR Approved Equal

B. COMPONENTS:

1. Foul Pole Upright:
 - a. 6" Schedule 40 Aluminum Pipe (6.625"O.D. x .280" Wall)
 - b. 30' Height Above Finish Grade of Perimeter Curb.
 - c. Super Durable Powder Coated Finish
 - i. Color: Yellow
 - d. Base Plate Mount

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2. Base Plate Mounting Kit
3. Assembly Hardware

2.02 Home Plate

A. MODEL:

1. SHP-UM – Hollywood MLB Universal Home Plate as Manufactured & Supplied by:

Sportsfield Specialties, Inc.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfield.com
(Basis of Design)

OR Approved Equal

B. COMPONENTS:

1. Home Plate:
 - a. 1.5” Thick
 - b. 7” Stanchion Mount with Ground Anchor & anchor plug

2.03 Base Anchor & Bases

A. MODEL:

1. SHIBL – Schutt/Hollywood Set of three Ground Anchor Mounts (3) & Set of Three (3) SHIBL Schutt Hollywood Impact Bases as Manufactured and Supplied by:

Sportsfield Specialties, Inc.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfield.com
(Basis of Design)

OR Approved Equal

B. COMPONENTS:

1. SHIBL – Schutt/Hollywood Impact Bases.

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- a. Include a set of three (3) Schutt Hollywood Impact Bases.
- b. Regulation size 15"x15"x2.5"
- c. Include a set of three (3) 6" ground mount anchors and base plugs.

2.04 Pitching Rubber

- A. SHBBPB – Schutt Four Sided Pitching Rubber as Manufactured and Supplied by:

Sportsfield Specialties, Inc.
P.O. Box 231
41155 State Highway 10
Delhi, NY 13753
p. 888-975-3343
www.sportsfield.com
(Basis of Design)

OR Approved Equal

- B. COMPONENTS:

1. SHBBPB- Schutt Four Sided Pitching Rubber:
 - a. Dimensions: 6"W x 24"L Four sided
 - b. Tube lining shall be filled with concrete.

2.05 Saf-Top Fence Top Guard

- A. MODEL:

1. Saf-Top Fence Guard As Manufactured and/or Supplied by:

Net Connection, LLC
7355 Gadsden Hwy.
Trussville, AL 35173
p. 205-508-5902
c. 205-948-7504
www.netconnectionllc.com
(Basis of Design)

- a. Color: As specified on drawings.
- b. 1 year Warranty

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

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- A. All field furnishing, equipment, and accessories shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings.
- B. Concrete foundation design by a Alabama licensed engineer and installation shall be provided by this installer.**
- C. Installer should have a minimum of five (5) football goal post, foul pole, & backstop net systems installations or similar experience in the previous three (3) years.

END OF SECTION

SECTION 328400 - PLAYING FIELD IRRIGATION

PART 1 - GENERAL

1.1 SUMMARY

- A. The Contractor shall provide a total ‘turn-key’ installation for the site. This includes all equipment necessary to install a conventional wired system, connecting with the Controller, including necessary wiring, communication equipment and lines needed to communicate with the controllers. The Contractor shall include all equipment and labor necessary to provide a fully functional, centrally controlled irrigation system installation at the point of final acceptance and turn-over to the Owner.
- B. Contractor shall provide full documentation of the warranty, terms and conditions of the warranty for all equipment.
- C. The system shall provide 100% irrigation coverage.

1.2 SUBMITTALS

- A. Contractor shall submit manufacturers product cut sheets for all irrigation materials to be used as specified on the bid documents.

1.3 QUALITY ASSURANCE

- A. Contractor’s Quality Assurance Responsibilities: Contractor is solely responsible for quality control of the Work.
- B. Permits and Fees: Contractor is responsible to obtain all required permits and pay all associated fees unless otherwise noted.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store PVC pipe in a neat and orderly manner fully supported and protected from sunlight.
- B. All equipment shall be delivered, unloaded and handled so as to protect from damage at all times.

1.5 PROJECT / SITE CONDITIONS

- A. The site irrigation water source shall be a 1” irrigation meter and backflow provided by owner.
- B. PVC shall not be cemented during wet conditions per the discretion of Owner’s Representative.

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- C. Trench excavation and backfilling shall not be performed during excessively wet conditions per the discretion of Owner's Representative.

1.6 SEQUENCE AND SCHEDULING

- A. The Contractor shall be solely responsible for coordinating, sequencing and scheduling all work with all applicable trades and/or sub-contractors so as to insure proper and timely performance.

1.7 WARRANTY

- A. Contractor shall provide a written warranty covering the entire system against defects in installation, workmanship and equipment for a period of one year from date of Final Acceptance.
- B. After the system is installed and approved, instruct groundskeeper personnel and maintenance staff in the complete operation, winterization, and maintenance of the system.

1.8 MANUFACTURER'S WARRANTY

- A. Contractor shall provide Owner with a warranty transfer that shall confer all applicable product warranties and replacement benefits to the Owner upon final acceptance.
- B. Provide this warranty transfer for each manufacturer whose products have been installed on the project.

1.9 MAINTENANCE

- A. Service: Contractor shall service and maintain system until the work has been deemed Substantially Complete.
- B. Irrigation shall be under full automatic operation for a period of two days prior to any planting in a given area.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Manufacturer: Subject to compliance with requirements, provide products of the following:
 - 1. RainBird Sprinkler Mfg., Co.
Or approved equal.

2.2 PIPE MATERIALS

- A. Plastic Pipe: All pipe and hose is free of blisters, internal striations, cracks or any other defects or imperfections. The pipe and hose are continuously and permanently marked with manufacturer's name, material type, size, and schedule or class and quality control identifications.
- B. Mainline 3" or smaller: Schedule 40 or 21 Class 200, Type 1120-1220 polyvinyl chloride (PVC); ASTM D1784 and D1785; uniformly white in color.
- C. Lateral: Class 200 (SDR 21); uniformly white in color.
- D. Sleeves: All new sleeves shall be PVC Schedule 40. Install sleeves in locations as shown on the drawings and at the depths specified for laterals and mainlines.

2.3 FITTINGS

- A. Plastic:
 - 1. Mainline 3" or smaller: Same as lateral.
 - 2. Lateral: ASTM D 2467, Schedule 40, socket-type, Type 1, Grade 1 polyvinyl chloride (PVC) with solvent weld or threaded connections in conformance with ASTM D1784 and D2466: uniformly white in color.
- B. Nipples:
 - 1. Metallic: Schedule 40 red brass (35% copper, 15% zinc) pipe: threaded both ends. Pipe shall be in accordance with ASTM B43.
 - 2. Plastic: Factory-threaded Schedule 80, Type 1, Grade 1 polyvinyl chloride (PVC) pipe, threaded both ends. Pipe shall be in conformance with ASTM D1784 and D1785. Color: gray.

2.4 JOINING MATERIALS

- A. Solvent Cement: ASTM F 656 primer and ASTM D 2564 solvent cement in color other than orange, compatible with PVC pipe and of proper consistency.
- B. Primer: IPS Corporation Weld-on #P-70.
- C. Cement: IPS Corporation Weld-on #705 for Class 200 P.V.C. or schedule 40 P.V.C. IPS Corporation Weld-on #795 for flexible P.V.C. to rigid P.V.C. connections.

2.5 VALVES

- A. Manual Isolation Valves:

1. Plastic: PVC Schedule 40

B. Electric Remote Control Valves: RainBird As specified on bid drawings or approved equal.

C. Valve Boxes: Valve boxes shall have green lids and shall be of a variety as produced by Carson, RainBird or acceptable equal.

- o Valve boxes shall be lockable as specified in bid drawings.

2.6 SPRINKLER HEADS

A. All rotary and spray sprinkler heads shall be RainBird or approved equal as specified on bid drawings.

2.7 AUTOMATIC CONTROL SYSTEM

A. General: RainBird Controllers shall function as the field controller and communication interface. See bid drawings for controller size and location.

B. No 2-wire systems will be considered.

2.8 GROUNDING

A. It is the responsibility of the Irrigation Contractor to provide grounding for all electrical irrigation equipment installed by him/her in relation to the irrigation control system.

2.9 SPARE WIRES

A. The contractor shall provide two sets of spare wires from the first and last valve in the system installed with the control wire in the same trench. Label each spare wire shall be tagged with the appropriate markings to identify the remote control valve. Terminate all spare wires in the controller box with the tags.

2.10 MISCELLANEOUS TOOLS & EQUIPMENT

A. Low Voltage Wire:

1. Control wires shall be UL rated for direct burial, Type UF, 14-gauge wire. Insulating jacket color shall be red.

2. Common wires shall be UL rated for direct burial, Type UF, 12-gauge wire. Insulating jacket color shall be white.

3. Spare control wires shall be UL rated for direct burial, Type UF, 14-gauge wire; Insulating jacket color shall be blue.

4. Spare common wire shall be UL rated for direct burial, Type UF, 12-gauge wire. Insulating jacket color shall be green.
 5. Splice connectors: 3M "DBY-6" splice connectors or acceptable equal.
- B. Valve Tags: Provide identification tag on flow control handle shaft, aluminum, plastic or other durable material, with valve station and controller number identified in 1/8" minimum letters.
- C. Drainage Backfill: Provide and install clean gravel or crushed stone, graded from 3 inches maximum to 3/4 inch minimum.

PART 3 - EXECUTION

3.1 GENERAL

- A. Verification of Conditions: Examine the areas to receive the Work and the conditions under which the Work would be performed. Remedy conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.
- B. Supervision: The Contractor, personally or through an authorized and competent representative shall supervise the work constantly, and shall as far as possible keep the same foremen and workmen on the job from commencement to completion. The workmanship of the entire job must in every way be first class, and only experienced and competent workmen shall be utilized for installation

3.2 PROTECTION

- A. The Contractor shall be responsible for storage of materials and any damage to the work covered by these Specifications before the final acceptance of the work.
- B. Protect work and materials from damage during construction. Storage of polyvinyl chloride (PVC) pipe and fittings shall be protected from direct sunlight. Beds on which materials are stored must be the full length of the pipe to avoid damage. Any pipe that has been damaged or dented shall not be used in the work.
- C. Any existing structures, equipment, utilities, pavement, landscaping, etc., damaged by Irrigation Contractor during the course of the work, including any damage caused by leakage or settling of piping systems being or having been installed by them, shall be restored at Contractor's expense and to the Owner's satisfaction.
- D. Securely cover openings into the system and cover apparatus, equipment, and appliances, both before and after being set in place, to prevent obstruction in the pipes and the breakage, misuse or disfigurement of the apparatus, equipment or appliances.
- E. Provide a dedicated trace wire for mainlines and laterals by taping (with electrical-rated tape) to the top of the pipe at 10-foot intervals along the entire length of the pipe. Also provide 24-inch coiled wire at all termination points.

3.3 PIPELINE ASSEMBLY

- A. Installation of all pipes and fittings shall be in strict accordance with the manufacturer's written specifications. Deviations from these specifications shall be permitted only with the written approval of Owner's Representative.

3.4 AUTOMATIC CONTROLLER

- A. The Contractor shall verify power location and type, as well as power connection requirements at that location. The Contractor shall be responsible to successfully connect the power to the controller. See bid drawings for location and details.

3.5 CLOSING OF PIPE AND FLUSHING LINES

- A. Flushing: Lines shall be thoroughly flushed out before installing quick coupling valves sprinklers or emitters.

3.6 BACKFILLING AND COMPACTING TO

- A. Rock free backfill material for mainline pipe is to be tamped in 4" (100 mm) layers under the pipe and uniformly on both sides of the full width of the trench or as shown, and the full length of the pipe. Materials are to be sufficiently damp to permit thorough compaction under and on each side of pipe, to provide support free of voids. PVC pipe is not to rest on concrete, rock, wood blocks, or similar items.
- B. All pipe is to be immediately backfilled with preliminary backfill sufficient to prevent arching or slipping under pressure.
- C. Other than for preliminary backfill over pipe, do not allow or cause any of the work to be covered before it has been inspected, tested and approved by the Owner's Representative.
- D. Upon approval of Owner's Representative, proceed to place remaining backfill. Backfill material will be clear of all debris and rocks larger than 2" (50 mm) in diameter. Finish grade of all trenches must conform to adjacent grades without dips, sunken areas, humps or other irregularities. Dispose properly of excess debris.
- E. Restore all surfaces, existing underground installations, damaged or cut as a result of the excavations to their original condition.

3.7 ADJUSTING THE SYSTEM

- A. Adjust alignment and coverage of all heads. If it is determined that adjustments in the irrigation equipment will provide proper and more adequate coverage, make all necessary changes or make arrangements with the manufacturer to have adjustments made, prior to any planting. These changes or adjustments shall be made without additional cost.

- B. Adjust and balance system to eliminate over spray and fogging and as directed by Architect.

3.8 TURN-OVER MATERIALS

- A. Final As-built Drawings: Two sets of these shall be produced, one for placement at or within the appropriate irrigation controller cabinet reduced to 11" x 17" and one full size set for storage at another location desired by the Owner's Representative.
- B. Operational and Maintenance Data: Submit two copies of owners manuals, maintenance schedule, and operational schedule in a folder labeled and indexed.
- C. Written One year warranty.

3.9 WARRANTY AND MAINTENANCE INSTRUCTIONS

- A. Fill and repair all depressions and replace all planted areas due to the settlement of irrigation trenches for one year following the completing and acceptance of the job. Use only approved planting soil materials.
- B. Instruct Owner's personnel in complete and proper operation, maintenance and winterization of the system prior to Final Acceptance.

END OF SECTION 328400

SECTION 329100 - PLAYING FIELD CONSTRUCTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish all labor, materials, facilities, transportation, and services to complete all playing field construction and related work as shown on the Drawings and specified herein.
- B. Scope of work: The general extent of the playing fields are shown on the Drawings and can include, but may not be limited to the following:
 - 1. Placement of a uniform depth of topsoil on prepared subgrade (herein after referred to as the "Topsoil").
 - 2. Placement of uniform 6" depth of infield clay on prepared sub-grade.
 - 3. Incorporation of pre-plant fertilizer into the topsoil.
 - 4. Establishment and Verification of Finish Grade.

1.2 RELATED SECTIONS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and applicable Division One and Division Two Specification sections, apply to work of this section.

1.3 REFERENCES AND REGULATORY REQUIREMENTS:

- A. American Society for Testing and Materials (ASTM)
 - 1. ASTM C136 - Sieve Analysis of Fine & Coarse Aggregates
 - 2. ASTM - D3665 -Random Sampling of Construction Materials
 - 3. ASTM D854 – Specific Gravity of Soils
 - 4. ASTM D2974 - Standard Test Method for Moisture, Ash and Organic Matter of Peat and Other Organic Soils
 - 5. ASTM F1632 - Standard Test Method for Particle Size Analysis and Sand Shape Grading Putting Greens and Sports Field Root Zone Mixes
 - 6. ASTM F1647 - Standard Test Method for Organic Matter Content of Putting Greens and Sports Field Root Zone Mixes (Method B)
 - 7. ASTM C136 - Sieve Analysis of Fine & Coarse Aggregates

1.4 SUBMITTALS

- A. Conform to requirements of applicable Division One and Contract specifications, General Conditions and Special Conditions.
- B. Bidder Qualifications: Contractor shall be actively and directly engaged in constructing native soil natural grass athletic fields for a period of five (5) or more years. Provide proof of three (3) such installations that have been in use for three (3) or more years.
 - 1. Projected Schedule: All contractors shall submit a proposed schedule for the project.
- C. Existing Topsoil Material Samples: Contractor shall submit to Owner's Testing Agent a one-gallon sample of existing topsoil from the field. This sample shall be a composite sample taken from five different locations evenly spread around existing field. Thoroughly mix the material after all samples are taken.

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Remove one gallon out of the bucket to fill a zip-lock bag. Double bag the composite sample. Label the composite sample appropriately with a permanent marker.

- D. Imported Topsoil Material Samples: Contractor shall submit to Owner's Testing Agent a one-gallon sample of topsoil to be imported. This sample shall be a composite sample taken from the respective stockpiled material allocated for this work. Thoroughly mix the material after all samples are taken. Remove one gallon out of the bucket to fill a zip-lock bag. Double bag the composite sample. Label the composite sample appropriately with a permanent marker indicating from which stockpile the sample was taken. Contractor shall maintain a photographic record of the sampled stockpile
- E. The Owner's Testing Agent will evaluate this material using the appropriate testing protocols to determine nutrient content of the soil.
- F. Certificates: Submit "cut-sheets" or other product literature showing certified chemical analysis of the following:
 - 1. All infield clay, fertilizers, soil amendments, herbicides.

1.5 DELIVERY, STORAGE AND HANDLING

- A. General:
 - 1. Handle and store all products of this Section in such a manner as to protect them from damage at all times.
 - 2. Storage of products on-site shall be coordinated by the contractor in an orderly manner so as not to unnecessarily impede the work or reasonable use of the project site.
- B. Fertilizers:
 - 1. Deliver in original, unopened containers with original labels intact and legible which state the guaranteed chemical analysis.
- C. Bulk Material:
 - 1. Coordinate delivery and storage of bulk material with Owner's Representative.
 - 2. Confine materials to neat piles in areas acceptable to Owner's Representative.

1.6 PROJECT/SITE CONDITIONS

- A. Comply with the environmental protection and safety requirements of the Owner and all governmental authorities having jurisdiction. Keep dust to a minimum. Maintain streets and walks free of mud, dirt and debris.
- B. Restoration of Damaged Property: When or where in the execution of the work under this contract, any direct or indirect damage injury is done to public or private property by or on account of any act, omission, neglect, or misconduct, the Contractor, at no additional cost to the Owner, shall restore the damaged property to a condition equal to that existing before damage or injury was done. Repair, rebuild or otherwise restore property as directed or make good such damage or injury in an acceptable manner.
- C. Playing Field Construction operations shall not be conducted under the following conditions:

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1. Freezing weather
2. High winds
3. Excessively wet conditions.

- D. Construction Surveying: The Contractor shall be responsible for all construction surveying required for the proper location of all work covered hereunder. The Contractor shall provide survey services to perform the final grade conformance survey. Any required additional survey costs shall be paid by the contractor.
- E. The Playing Field subgrade shall be a smooth, clean basin free of any debris and/or loose soil to the tolerances specified.

1.7 GUARANTY

- A. All work executed and all materials provided under or used under this Section shall be guaranteed to be free of defects and poor workmanship as set forth in the contract documents.
- B. Repair all defective materials and work as acceptable to the Owner's Representative during guaranty period.

PART 2 - PRODUCTS

2.1 TOPSOIL MATERIALS

A. Topsoil for Playing Fields

1. Topsoil shall be a natural friable soil, possessing characteristics of representative productive soils in the vicinity from which it is obtained.
2. Topsoil shall be classified according to the USDA soil textural classification. USDA definitions are as follows:

Sand – 270 mesh (0.05mm) to 18 mesh (1.0mm)
Silt – 0.002mm to 0.05mm
Clay – < 0.002mm
3. The soil shall meet classification requirements for a sandy loam to silt loam texture. Soils approved for use in specific planting areas shall remain consistent in sand, silt, and clay composition.
4. The topsoil shall be free from subsoil, clay lumps, stones or similar objects larger the 3/8" in greatest diameter, brush, stumps, roots, objectionable weeds or litter, excess acid or alkali or ay other material or substance which may be harmful to plant growth or a hindrance to subsequent smooth grading, planting and maintenance operations. Foreign material shall not exceed 2% by volume or weight. Texture to be defined by % sand, % clay, and % silt taken from sample material provided for testing.
5. The source of topsoil shall be the existing soil on the site and currently on the playing fields. If additional is required, the stockpiled source should be made known to the Landscape Architect. The topsoil shall be stockpiled and tested and approved prior to placement on the site. Consistent composition of topsoil will be required throughout the entire project.

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2.2 PRE-PLANT FERTILIZERS

A. Granular Humic Acid

1. GCO Granular Humic Acid

Gulf Coast Organic, Inc.
17588 Highway 98 West
Foley, AL 36535
Phone: 251-952-4769
www.gcogrows.com

Or Approved Equal

B. Dolomitic Lime

1. Pelletized Dolomitic Lime

Gulf Coast Organic, Inc.
17588 Highway 98 West
Foley, AL 36535
Phone: 251-952-4769
www.gcogrows.com

Or Approved Equal

C. Pre-Plant Fertilizer

1. Primeria Organic 3-3-3 Fertilizer

Gulf Coast Organic, Inc.
17588 Highway 98 West
Foley, AL 36535
Phone: 251-952-4769
www.gcogrows.com

Or Approved Equal

2.3 INFIELD MATERIALS FOR SKINNED AREAS AND MOUND AREAS

A. The infield skinned areas shall be installed to a uniform depth of 6" min. over a compacted subgrade to 95% standard proctor.

B. The Infield Materials for Skinned Area shall be 70% Clay and 30% Sand and intended for use for infields and pitching mounds. The color must be red to brown in color.

C. The Infield Materials for the Skinned Areas shall be GCO Infield Mix as distributed by:

Gulf Coast Organic, Inc.
17588 Highway 98 West
Foley, AL 36535
Phone: 251-952-4769
www.gcogrows.com

Or Approved Equal

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2.4 INFIELD CONDITIONER

- A. Infield Conditioner shall be an illite clay with 60% minimum amorphous silica. Material must be processed in a rotary kiln operation at temperatures not less than 1300 degrees Fahrenheit. Product must then be screened and de-dusted.
- B. The Infield Conditioner shall be Turface MVP as distributed by:

Gulf Coast Organic, Inc.
17588 Highway 98 West
Foley, AL 36535
Phone: 251-952-4769
www.gcogrows.com

Or Approved Equal

PART 3 - EXECUTION

3.1 PLACING TOPSOIL MATERIALS

- A. Materials shall not be saturated, nor have excessive free water during mixing. Materials shall be evenly and uniformly distributed in the amended soil mix.
- B. In performing this work, Contractor shall avoid damage to any existing structures or features of the playing field or features under construction, such as grading, drainage and irrigation systems. The Contractor shall repair any such damage at his own expense.
- C. The topsoil material shall be placed at the edge of the field and pushed to the center with low weight displacement track equipment. Alternative methods shall be approved by the Landscape Architect.
 - 1. Under no circumstances will loaded rubber-tired vehicles or equipment with a loading rate in excess of 5-lbs/in² be allowed on the drainage fill layer prior to or during the spreading of the topsoil material. The Contractor shall not leave any wheel ruts and the subgrade must remain smooth.
- D. Prevent contamination or mixing of topsoil with other materials. Remove contaminated materials as directed by the Owner's Representative.
- E. Truck delivery of materials into the site must be accomplished in such a manner as to not alter the subgrade and/or damage irrigation equipment and systems.
- F. Provide Topsoil material throughout the playing fields in a smooth and compacted finished condition. Bring topsoil material to the designed grade by alternately raking, watering and rolling. The entire playing field shall then be checked for irregularities and adjusted to a uniform grade.
- G. Contractor shall avoid using the same path to place and install the topsoil to minimize and avoid compaction of the soil during construction. If an area seems to be consistent with over-trafficking and compaction, at the discretion of the Landscape Architect, the Contractor shall replace with area with new topsoil material.

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3.2 APPLYING PRE-PLANT FERTILIZER

- A. Apply pre-plant fertilizer (3-3-3) at a rate of 600 lbs. per acre and incorporated into topsoil to a depth of 1 to 3 inches. Pre-plant fertilizer should be applied to surface and watered with two (2) passes of an irrigation head. Pre-plant fertilizer should not be applied more than four (4) hours before grassing operations.
- B. Apply Dolomitic Lime at a rate of 1000 lbs per acre. Dolomitic Lime shall be spread over the field and incorporated into topsoil to a depth of 1 to 3 inches.
- C. Apply Granular Humic Acid at a rate of 350 lbs per acre. Incorporated to a depth of 1 to 3 inches

3.3 FINISHED GRADE VERIFICATION

- 1. Contractor shall schedule a site inspection with Landscape Architect with a min. of 48 Hours notice to review onsite finished grades. Contractor shall have at minimum a calibrated laser transit set up during meeting and be prepared to spot check grades for verification. No sodding shall take place until finished grade verification inspection is complete.
- 2. Contractor shall address and repair elevations found to deviate from the drawings and that do not ensure smooth, consistent, positive drainage off of field.

END OF SECTION 329100

SECTION 329113 - SOIL PREPARATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes planting soils specified by composition of the mixes.
- B. Related Requirements:
 - 1. Section 329200 "Lawns and Grasses" for placing planting soil for turf and grasses.

1.3 DEFINITIONS

- A. AAPFCO: Association of American Plant Food Control Officials.
- B. Backfill: The earth used to replace or the act of replacing earth in an excavation. This can be amended or unamended soil as indicated.
- C. CEC: Cation exchange capacity.
- D. Compost: The product resulting from the controlled biological decomposition of organic material that has been sanitized through the generation of heat and stabilized to the point that it is beneficial to plant growth.
- E. Duff Layer: A surface layer of soil, typical of forested areas, that is composed of mostly decayed leaves, twigs, and detritus.
- F. Imported Soil: Soil that is transported to Project site for use.
- G. Layered Soil Assembly: A designed series of planting soils, layered on each other, that together produce an environment for plant growth.
- H. Manufactured Soil: Soil produced by blending soils, sand, stabilized organic soil amendments, and other materials to produce planting soil.
- I. NAPT: North American Proficiency Testing Program. An SSSA program to assist soil-, plant-, and water-testing laboratories through interlaboratory sample exchanges and statistical evaluation of analytical data.

- J. Organic Matter: The total of organic materials in soil exclusive of undecayed plant and animal tissues, their partial decomposition products, and the soil biomass; also called "humus" or "soil organic matter."
- K. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified as specified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- L. RCRA Metals: Hazardous metals identified by the EPA under the Resource Conservation and Recovery Act.
- M. SSSA: Soil Science Society of America.
- N. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- O. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.
- P. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil"; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- Q. USCC: U.S. Composting Council.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include test data substantiating that products comply with requirements.
 - 2. Include sieve analyses for aggregate materials.
 - 3. Material Certificates: For each type of imported soil and soil amendment and fertilizer before delivery to the site, according to the following:
 - a. Manufacturer's qualified testing agency's certified analysis of standard products.
 - b. Analysis of fertilizers, by a qualified testing agency, made according to AAPFCO methods for testing and labeling and according to AAPFCO's SUIP #25.
 - c. Analysis of nonstandard materials, by a qualified testing agency, made according to SSSA methods, where applicable.
- B. Samples: For each bulk-supplied material, **1-quart** volume of each in sealed containers labeled with content, source, and date obtained. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of composition, color, and texture.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For each testing agency.

- B. Preconstruction Test Reports: For preconstruction soil analyses specified in "Preconstruction Testing" Article.
- C. Field quality-control reports.

1.6 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent, state-operated, or university-operated laboratory; experienced in soil science, soil testing, and plant nutrition; with the experience and capability to conduct the testing indicated; and that specializes in types of tests to be performed.
 - 1. Laboratories: Subject to compliance with requirements, provide testing by one of the following:
 - a. Auburn University Extension Service or similar
334-844-3958
aces.edu/soiltest
soiltest@auburn.edu
 - 2. Multiple Laboratories: At Contractor's option, work may be divided among qualified testing laboratories specializing in physical testing, chemical testing, and fertility testing.

1.7 SOIL-SAMPLING REQUIREMENTS

- A. General: Extract soil samples according to requirements in this article and after subgrade is established for the natural fields.
- B. Sample Collection and Labeling: Have samples taken and labeled by Contractor in presence of Architect:
 - 1. Number and Location of Samples: Minimum of **four** representative soil samples **from each natural field** for each soil to be used or amended for landscaping purposes.
 - 2. Procedures and Depth of Samples: Collect a representative blend of soil from 0-6" deep at each location and combine into one sample per field.
 - 3. Division of Samples: Split each sample into two, equal parts. Send half to the testing agency and half to Owner for its records.
 - 4. Labeling: Label each sample with the date, location keyed to a site plan or other location system, visible soil condition, and sampling depth.

1.8 TESTING REQUIREMENTS

- A. General: Perform tests on soil samples according to requirements in this article.

B. Physical Testing:

1. Soil Texture: Soil-particle, size-distribution analysis by one of the following methods according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods":
 - a. Sieving Method: Report sand-gradation percentages for very coarse, coarse, medium, fine, and very fine sand; and fragment-gradation (gravel) percentages for fine, medium, and coarse fragments; according to USDA sand and fragment sizes.
 - b. Hydrometer Method: Report percentages of sand, silt, and clay.

C. Fertility Testing: Soil-fertility analysis according to standard laboratory protocol, including the following:

1. Percentage of organic matter.
2. CEC, calcium percent of CEC, and magnesium percent of CEC.
3. Soil reaction (acidity/alkalinity pH value).
4. Nitrogen ppm.
5. Phosphorous ppm.
6. Potassium ppm.
7. Presence and quantities of problem materials including salts and metals cited in the Standard protocol. If such problem materials are present, provide additional recommendations for corrective action.

D. Organic-Matter Content: Analysis using loss-by-ignition method according to SSSA's "Methods of Soil Analysis - Part 3- Chemical Methods."

E. Recommendations: Based on the test results, state recommendations for soil treatments and soil amendments to be incorporated to produce satisfactory planting soil suitable for healthy, viable plants indicated. Include, at a minimum, recommendations for nitrogen, phosphorous, and potassium fertilization, and for micronutrients.

1. Fertilizers and Soil Amendment Rates: State recommendations in weight per 1000 sq. ft.
2. Soil Reaction: State the recommended liming rates for raising pH or sulfur for lowering pH according to the buffered acidity or buffered alkalinity in weight per 1000 sq. ft.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and compliance with state and Federal laws if applicable.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.

3. Do not move or handle materials when they are wet or frozen.
4. Accompany each delivery of bulk fertilizers and soil amendments with appropriate certificates.

PART 2 - PRODUCTS

2.1 PLANTING SOILS SPECIFIED BY COMPOSITION

- A. General: Soil amendments, fertilizers, and rates of application specified in this article are guidelines that may need revision based on testing laboratory's recommendations after preconstruction soil analyses are performed.
- B. **Planting-Soil Type for Natural Turf Fields:** Imported, naturally formed soil from off-site sources and consisting of light brown, sandy loam, screened subsoil; and modified to produce viable planting soil.
 1. Sources: Take imported, unamended soil from sources that are naturally well-drained sites where topsoil occurs at least 4 inches deep, not from agricultural land, bogs, or marshes; and that do not contain undesirable organisms; disease-causing plant pathogens; or obnoxious weeds and invasive plants including, but not limited to, quackgrass, Johnsongrass, poison ivy, nutsedge, nimblewill, Canada thistle, bindweed, bentgrass, wild garlic, ground ivy, perennial sorrel, and bromegrass.
 2. Additional Properties of Imported Soil before Amending: Soil reaction of **pH 6 to 7** and minimum of **6** percent organic-matter content, friable, and with sufficient structure to give good tilth and aeration.
 3. Unacceptable Properties: Clean soil of the following:
 - a. Unacceptable Materials: Concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
 - b. Unsuitable Materials: Stones, roots, plants, sod, clay lumps, and pockets of coarse sand that exceed a combined maximum of **8** percent by dry weight of the imported soil.
 - c. Large Materials: Stones, clods, roots, clay lumps, and pockets of coarse sand exceeding 1 inches in any dimension.
 4. Material:
 - a. Screened, Light brown, sandy subsoil.

2.2 FERTILIZERS

- A. Refer to Section 329200 "Lawns and Grasses"

PART 3 - EXECUTION

3.1 GENERAL

- A. Place planting soil and fertilizers according to requirements in other Specification Sections.
- B. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in planting soil.
- C. Proceed with placement only after unsatisfactory conditions have been corrected.

3.2 PLACING AND MIXING PLANTING SOIL OVER EXPOSED SUBGRADE

- A. General: Apply and mix unamended soil with amendments on-site to produce required planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
- B. Subgrade Preparation: Till subgrade to a minimum depth of **2 inches**. Remove stones larger than **1 inches** any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
- C. Mixing: Spread unamended soil to total depth of **4 inches** but not less than required to meet finish grades after mixing with amendments and natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet.
 - 1. Amendments: Apply soil amendments and fertilizer, if required, evenly on surface, and thoroughly blend them with unamended soil to produce planting soil.
 - a. Mix fertilizer with planting soil no more than seven days before planting.
- D. Compaction: Compact each blended lift of planting soil to **70** percent of maximum Standard Proctor density according to ASTM D698 and tested in-place.
- E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades as specified on drawings.

3.3 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Perform the following tests:
 - 1. Compaction: Test planting-soil compaction after placing each lift and at completion using a densitometer or soil-compaction meter calibrated to a reference test value based on laboratory testing according to ASTM D698. Space tests at no less than one for each 5000 sq. ft. of in-place soil or part thereof.

2. See Section 014000 "Quality Requirements" for retesting and reinspecting requirements and Section 017300 "Execution" for requirements for correcting the Work.

- C. Soil will be considered defective if it does not pass tests.
- D. Prepare test reports.
- E. Label each sample and test report with the date, location keyed to a site plan or other location system, visible conditions when and where sample was taken, and sampling depth.

3.4 PROTECTION

- A. Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:
 1. Storage of construction materials, debris, or excavated material.
 2. Parking vehicles or equipment.
 3. Vehicle traffic.
 4. Foot traffic.
 5. Erection of sheds or structures.
 6. Impoundment of water.
 7. Excavation or other digging unless otherwise indicated.
- B. If planting soil or subgrade is overcompacted, disturbed, or contaminated by foreign or deleterious materials or liquids, remove the planting soil and contamination; restore the subgrade as directed by Architect and replace contaminated planting soil with new planting soil.

3.5 CLEANING

- A. Protect areas adjacent to planting-soil preparation and placement areas from contamination. Keep adjacent paving and construction clean and work area in an orderly condition.
- B. Remove surplus soil and waste material including excess subsoil, unsuitable materials, trash, and debris and legally dispose of them off Owner's property unless otherwise indicated.
 1. Dispose of excess subsoil and unsuitable materials on-site where directed by Owner.

END OF SECTION 329113

SECTION 329200 - PLAYING FIELD SODDING

PART 1 PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1-Specification sections, apply to work of this section.

1.2 DESCRIPTION

- A. This section covers furnishing, delivery, installation of turf sod, and maintenance during turf establishment in accordance with this specification at the locations indicated on the Drawings.
- B. Sod installation includes, but is not limited to, the following:
1. Installation of turfgrass sod in designated areas.
 2. Maintenance of sod during grow-in and turf establishment unless otherwise noted by the Owner or Owner's Representative.
- C. Related sections include:
1. Included Division 2 through Division 16 technical specifications.

1.3 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.
1. American Sod Producers Association (ASPA)
 2. ASPA GSS 1988 Guideline Specifications for Sodding
 3. Commercial Item Descriptions (CID)
 4. CID A-A-1909 Fertilizer
 5. Department of Agriculture (DOA) DOA FSA 1985 Federal Seed Act Rules DOA SSIR 1984 Soil Survey Laboratory Methods and Procedures for Collecting Soil Samples

1.4 SUBMITTALS

- A. Furnish three (3) copies of manufacturer literature, samples, certifications, or laboratory analytical data for the following items.
1. Sod:
 - a. Address of grower
 - b. Location of growing field.
 - c. Seed Certification
 2. Fertilizer (certification or laboratory analytical data).

1.5 JOB CONDITIONS

- A. This Contract shall include harvesting (cutting) the turf at the approved sod farm, transporting the turf to the site, and installing the turf at the site. All supplied turf shall meet the quality requirements of this specification.
- B. Schedule: Installed turfgrass sod shall be mature and suitable for foot traffic per date to be established by the Owner. See this Section for "Acceptance of Turf" for additional parameters.

PART 2 PRODUCTS

1.1 SOD FOR FIELDS

- A. Turfgrass Sod (for Playing Field areas):
 - 1. Sod shall be nursery grown variety as specified on drawings.
 - 2. Sod may be harvested and arrive on-site netted, but the netting shall be removed during installation of the sod.
 - 3. Machine cut sod at a uniform thickness of 0.75 inches within a tolerance of ± 0.25 inches, excluding top growth and thatch.
 - 4. Sod shall be composed of healthy living stems and roots providing a heavy and dense sod not less than 10 months old that is mature and free of weeds and disease and insects.

1.2 QUALITY FACTORS

- A. Uniformity of cut is required. Sod thickness shall be 0.75" across the width and length of each section with a maximum deviation of 1/4". Thickness and width shall be kept to strict dimensions. Broken strips, irregularly shaped pieces, and torn or uneven ends will be rejected. Edges shall be cut at 90-degree angles to provide for tight fit during installation.
- B. Quality Control: Sod shall be subject to inspection and approval by Owner's Representative at place of growth and upon delivery for conformity to specifications. Such approvals shall not impair the right of inspection and rejection during progress of the Work. Owner may reject sod not meeting specification as determined by the Owner's sole judgment.
- C. Mowing height: Sod shall be mowed and maintained uniformly at a height of 1.50 to 2.00 inches depending on environmental conditions for a period of 4 weeks prior to harvesting. Before shipping, sod shall be groomed.
- D. Diseases and soil borne insects: State Nursery and/or Plant Material laws require that all soil entering Interstate Commerce be inspected and approved for sale.
- E. Weeds: Cultivated sod shall be free from objectionable grassy and broadleaf weeds. Sod will not be acceptable if it contains any weeds or if it is not true to species.
- F. Moisture content: Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect survival of the sod.

1.3 FERTILIZER

- 1. Refer to Playing Field Construction Section 329100

PART 3 – EXECUTION

1.1 HARVESTING TURF MATERIALS

- A. Sod must be cut in full 42” to 48” width rolls minimum fielding lengths that can be transported and installed.
- B. The Contractor shall be solely responsible for the safe transportation of turf to the site and condition upon arrival. Turf damaged, dehydrated or abused during transit or storage will be rejected.
- C. Coordinate harvesting and planting operations to prevent exposure of sod to the sun for more than 8 hours.

1.2 INSTALLATION OF SOD

- A. Prior to laying of any sod, the topsoil must be completely settled and smoothed to the required grades for sod installation. The topsoil surface should be scarified and loosened prior to placement of amendments and installation of sod.
- B. Sod exhibiting heat or drought stress and not installed within 36 hours after cutting will be rejected. Sod cutting and shipping shall be coordinated with the sod grower. Moisten prepared areas before sod installation to a depth of 4”.
- C. When placing sod, the Contractor shall use great care so as not to disturb the finished grades of the topsoil. Contractor will make provisions to avoid rutting of the topsoil. Equipment used to lay sod shall have tracks or large floatation tires. Equipment shall not allowed to drive over laid sod.
- D. The first row of sod should, if possible, be laid in a straight line with subsequent rows placed parallel and tightly against one another. Lateral joints shall be staggered 36 inches minimum to promote more uniform growth and strength. Do not stretch or overlap sod pieces. All joints are butted tight in order to prevent voids. Lap ends of sod rolls 6" and cut new tight joint.
- E. Sod laid adjacent to hard surfaces shall be laid 1/2" above the tops of adjacent surfaces.
- F. Water and Rolling: The sod shall be watered immediately after installation to prevent drying during progress of the work. The Contractor shall have adequate equipment available to water the sod as specified herein. As sod installation is completed in any one section, the entire area shall be thoroughly irrigated to a one-inch depth below the new sod pad. After a short drying period, the sod should be rolled to firm the sod pad.

1.3 TURF MAINTENANCE

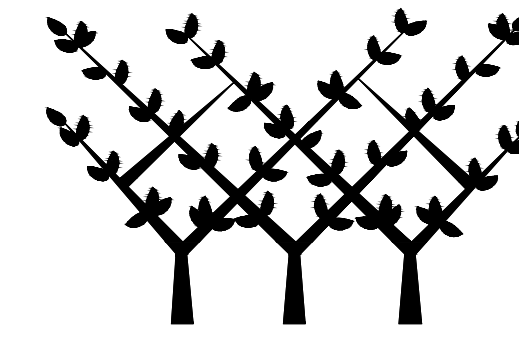
- A. Current cultural management practices may be modified in accordance with tissue test results or environmental conditions.

- B. The Owner will not assume maintenance of the turf until after Substantial Completion and after the turf has been inspected and approved by the Owner's Representative. Until that time, the Contractor shall perform all maintenance.
- C. The Contractor shall be responsible for the performance and operation of the turfgrass areas during the construction, maintenance period and until final acceptance. The Contractor shall keep technically qualified personnel on-site and maintain adequate labor, equipment and supplies in reserve to immediately repair the system or components in the event of any deficiency or failure during the interim maintenance period.
- D. The Contractor shall provide all operations necessary to maintain the field through the date of acceptance. The following list of items represents the minimum operations necessary to maintain the turfgrass lawn areas.
- E. Mowing: Cutting height will be determined by environmental conditions, condition of sod, and time of year or activities. Turf height will be maintained using only sharp, clean equipment capable of cutting heights of 1.50 to 2.25 inches. Not more than 1/3 of the grass leaf will be removed by the initial cutting or subsequent cuttings. Turf will be maintained to a neat appearance.
- F. Weed and Pest Control: The Contractor is to maintain the turf free from disease and infestation. Required treatments will be made according to the needs of the turf as determined by the Owner's Representative. Comply with applicable requirements of Federal, State, and Local laws, regulations and codes having jurisdiction over chemical treatments. Apply a brown patch preventative fungicide as per manufacturer's recommendations either at the sod farm or after sod installation.

1.4 ACCEPTANCE OF TURF

- A. The Owner's Representative will inspect the turf. Final acceptance will follow Owner's Representative's final approval of the punch list and the following criteria:
 - 1. Turf has rooted into the Topsoil to a depth of 1 inch.
 - 2. The turfgrass surface has a smooth appearance.
 - 3. Turf is free of dead or bare spots in excess of 3 square inches.

END OF SECTION 329200



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Espalier, LLC
P.O. Box 1247
Fairhope, Alabama 36533
P: 251.454.3500
espalierdesign.com

FIGURES PARK

658 Donald St. C - Mobile, AL 36617

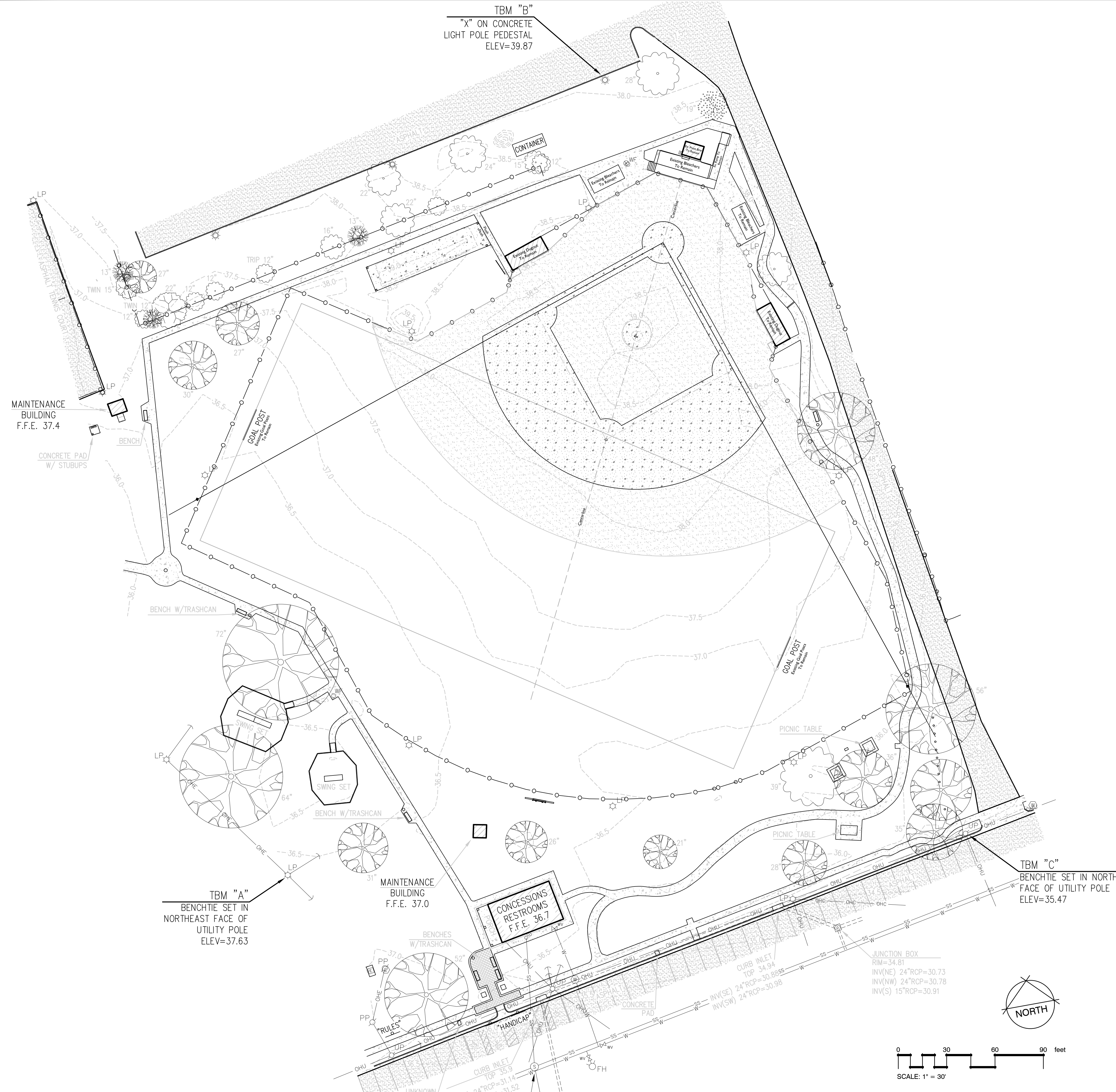
Combo Field Improvements

PROJECT# PR-066-22

Prepared for:
The City of Mobile Alabama
Architectural Engineering Department
P.O. Box 1827 - Mobile, AL 36633-1827

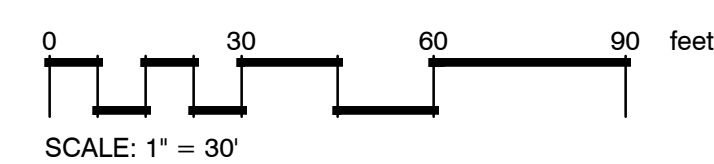
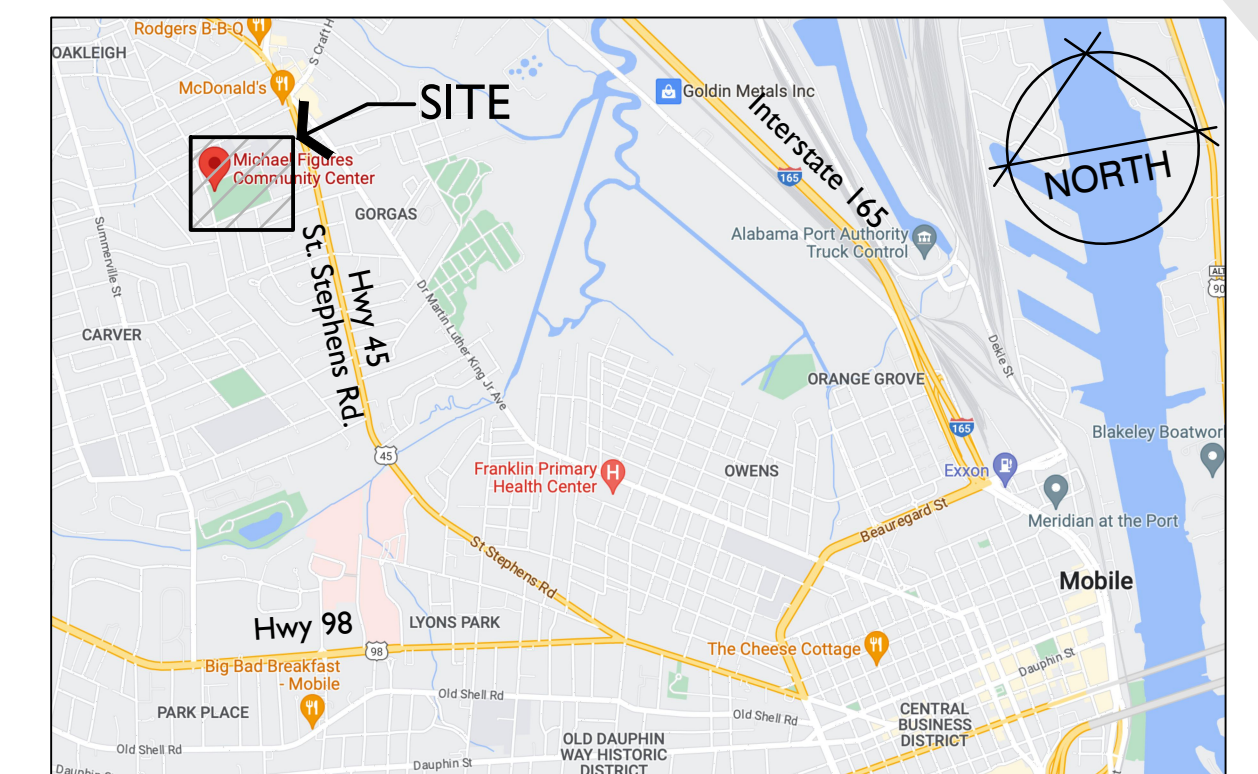
Landscape Architect:
Espalier Landscape Architecture
P.O. Box 1247 - Fairhope, AL 36533
251-454-3500

Civil Engineer:
S.E. Civil Engineering
9969 Windmill Road
Fairhope, AL 36532
251-990-6566

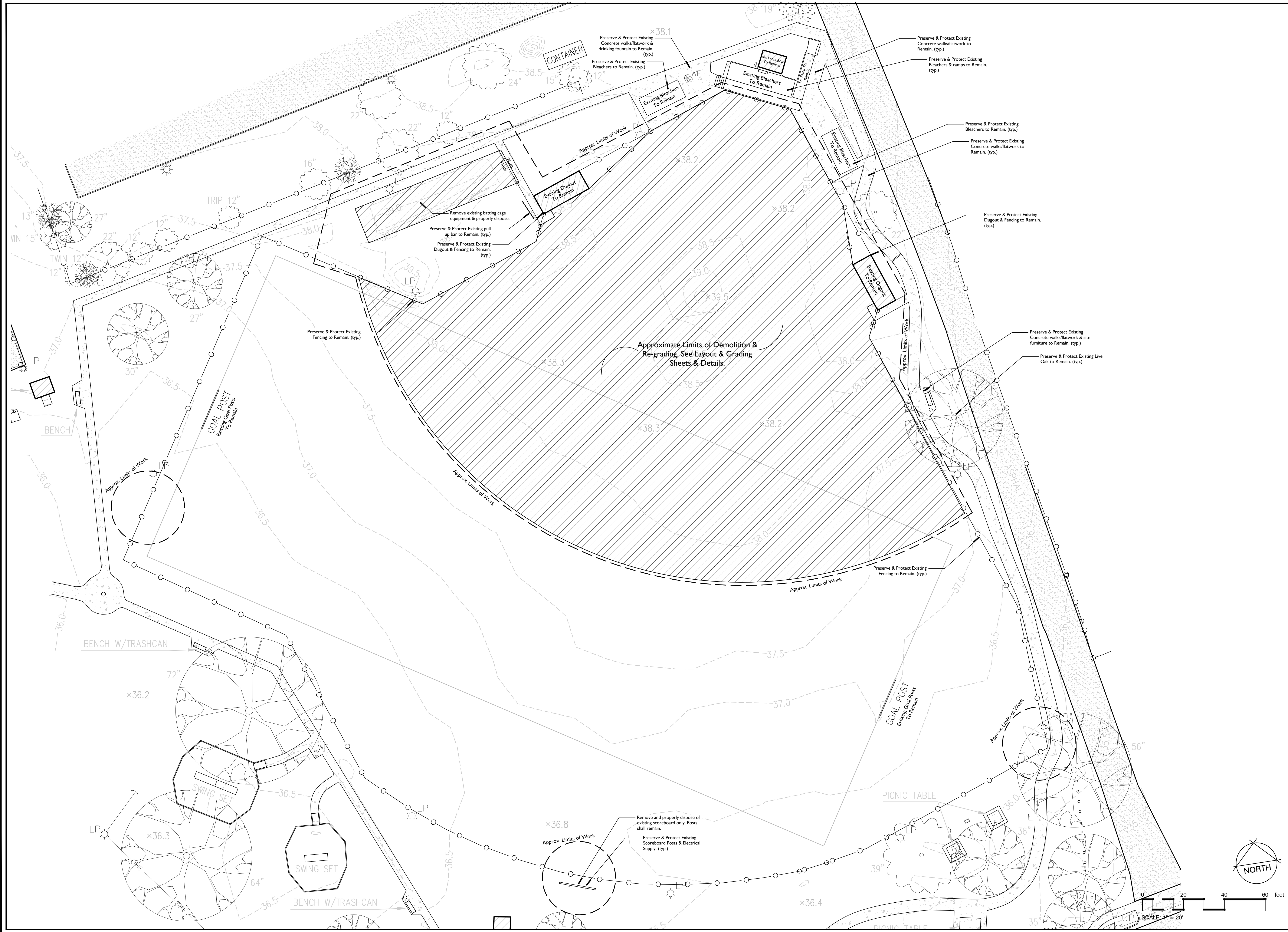


SHEET INDEX

SHEET	DESCRIPTION
I.1	Survey
I.2	Demolition Plan
C01	Erosion & Sediment Control
C02	Construction Details
L-1.2	Field Layout Plan
L-1.3	Field Grading Plan
L-1.4	Field Irrigation Plan
L-1.5	Painting Plan
L-5.0	Field Details
L-5.1	Irrigation Details



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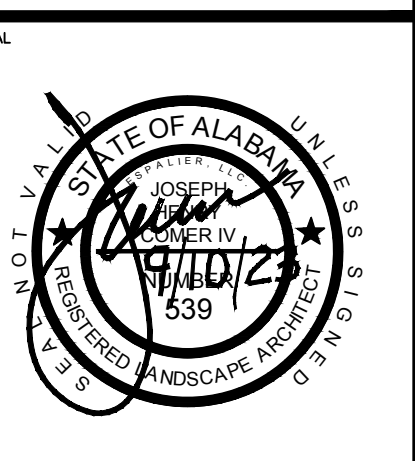
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Espalier, LLC
P.O. Box 1247
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P. 251.454.3500
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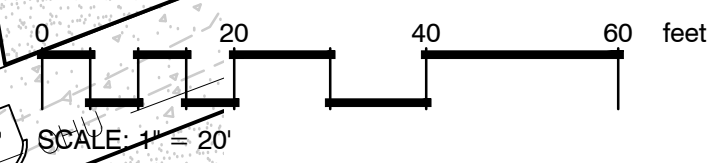
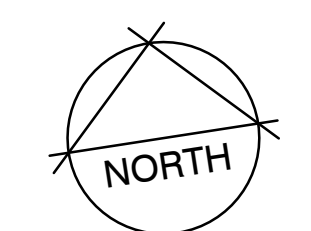
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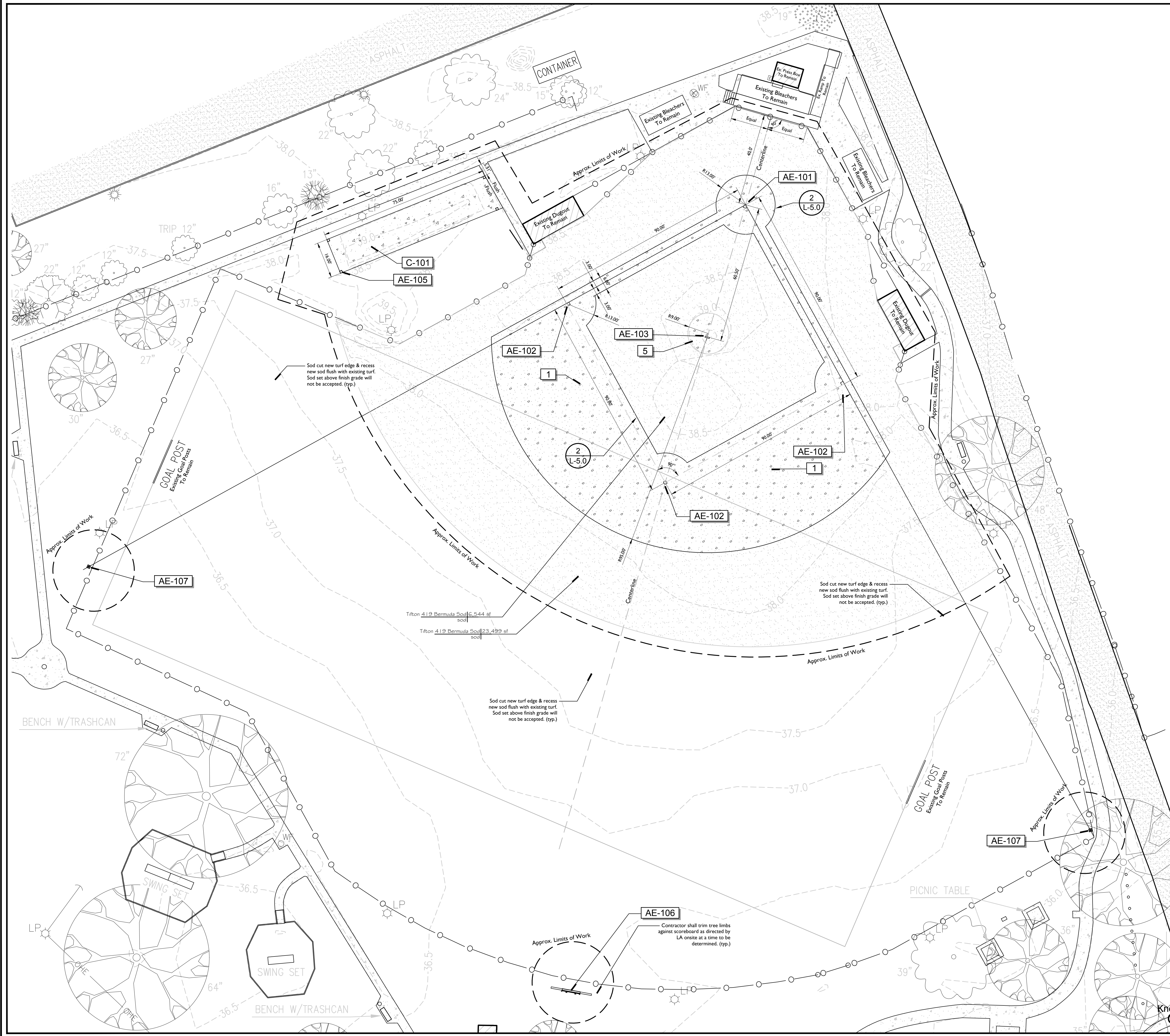
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SHEET TITLE

FIELD DEMOLITION PLAN

DESIGNED BY JC	FILE NAME FIGLA
DRAWN BY JC	SHEET 1.2
CHECKED BY JC	
PROJECT NO. 2316	
DATE 4/28/23	





- NOTES:
1. Survey provided by owner.
 2. Field verify all layout and dimensions prior to construction.
 3. Field verify location of all structures, hardscape, utilities, drainage, vegetation, & conditions.
 4. Contractor shall be responsible for all site layout using a licensed surveyor.
 5. Contractor shall be responsible to preserve and protect all existing conditions to remain.
 6. Contractor is responsible for calling line locate and verifying presence of any & all utilities. Utilities shown are for information only.
 7. Contractor is responsible for ensuring positive drainage.
 8. Contractor shall obtain all required permits.
 9. Quantities are provided for convenience only. Contractor shall verify.
 10. Report any discrepancies to Landscape Architect immediately.

Note: All baseball field dimensions & layout shall be per the current NFHS Rules & Alabama Highschool Sports Rules. (typ.)

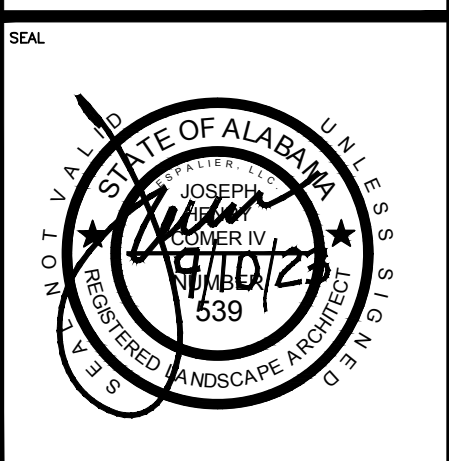
- GENERAL NOTES:
1. The Contractor shall be responsible for all required permits, licenses, fees related to executing this work. This work shall comply with all local, state, & federal codes.
 2. Existing conditions shown are based on survey information provided by Wattier Surveying, Inc. Contractor shall report any discrepancies found in the field to Landscape Architect for clarification.
 3. Before beginning work, the contractor shall thoroughly acquaint himself with the existing site conditions and proposed plans. The intent is to provide a smooth transition between existing conditions that are to remain and the new site features with minimal damage to existing trees and vegetation.
 4. Contractor is made aware of active existing underground utilities. It is the contractors responsibility to familiarize himself with the location of said utilities and other obstructions. The contractor shall investigate and verify, in the field, the existence and location of all utilities and any existing irrigation piping, and take necessary precautions to prevent their disturbance and avoid interruption of service. Contractor is responsible for calling appropriate line location service. All damaged utilities shall be replaced to owners satisfaction by contractor with no additional charge to owner.
 5. The contractor shall protect all finished surfaced that are existing and remain. Items to remain that are damaged by this work shall be replaced by this contractor at no expense to the owner.
 6. Once delivered to the site, the contractor is responsible for the protection, including theft, of all materials.
 7. The landscape architect shall have the right to reject any and all work and/or materials at any stage of progress which in his opinion do not meet the requirements of these plans and specifications. Such rejected material shall be removed from the site immediately and replaced with acceptable materials.
 8. No work shall be performed in any R.O.W. without approval by the appropriate Federal, State, County, or City authority.



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 P.O. Box 1247
 Fairhope, Alabama 36533
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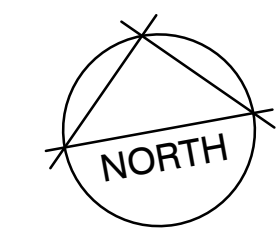
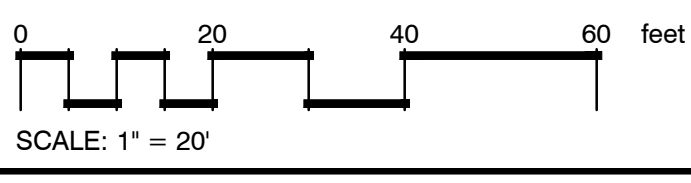
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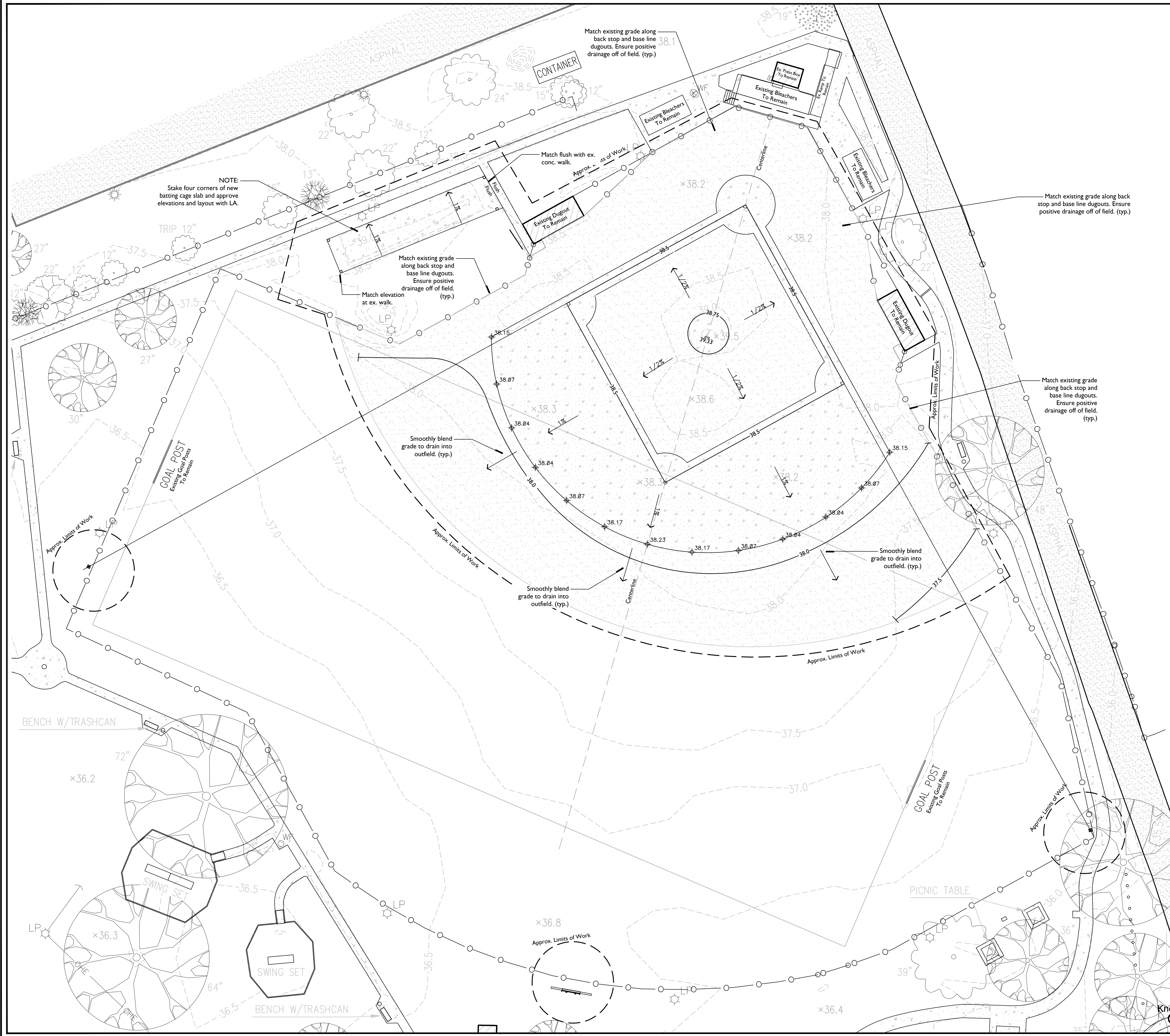
FIELD LAYOUT PLAN

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DRAWN BY JC	SHEET L-1.2
CHECKED BY JC	
PROJECT NO. 2316	
DATE 4/28/23	



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- NOTES:
1. Survey provided by owner.
 2. Field verify all layout and dimensions prior to construction.
 3. Field verify location of all structures, hardscape, utilities, drainage, vegetation, & conditions.
 4. Contractor shall be responsible for all site layout using a licensed surveyor.
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Note: All baseball field dimensions & layout shall be per the current NFHS Rules & Alabama Highschool Sports Rules. (typ.)

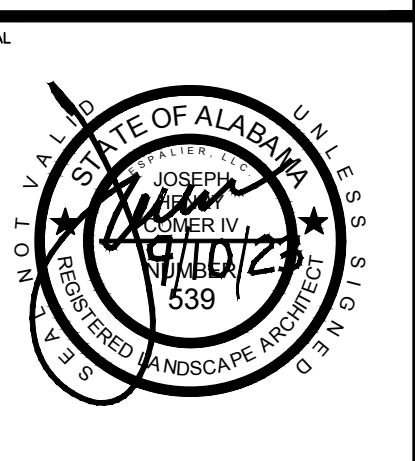


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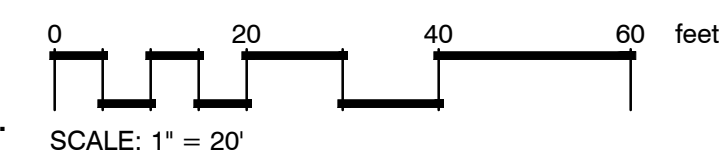
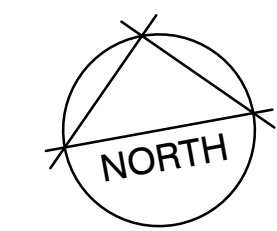
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98% Review 7/26/23 For Bid 9/10/23

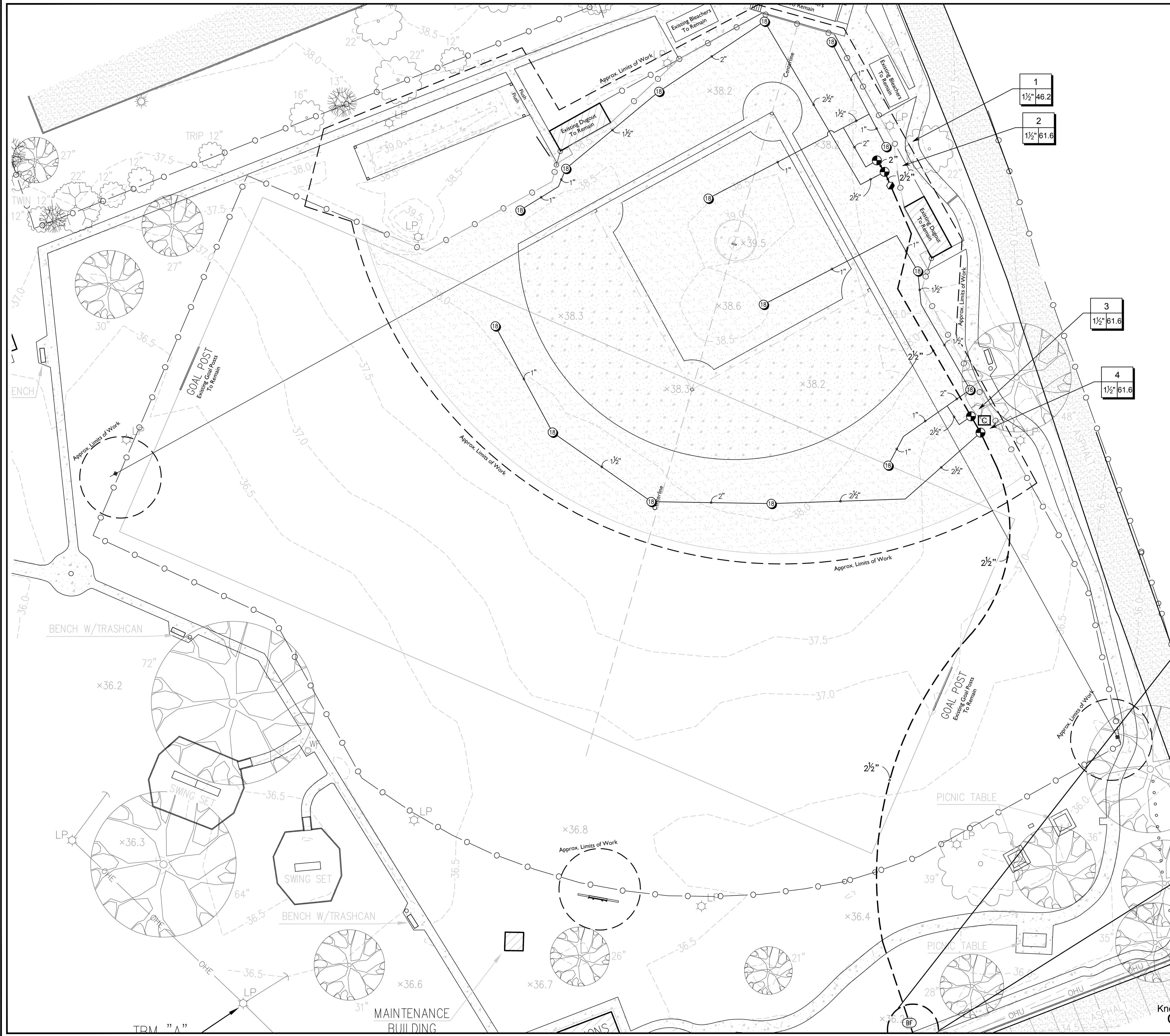
FIELD GRADING PLAN

DESIGNED BY JC	FILE NAME FIGLA
DRAWN BY JC	SHEET L-1.3
CHECKED BY JC	PROJECT NO. 2316
DATE 4/28/23	



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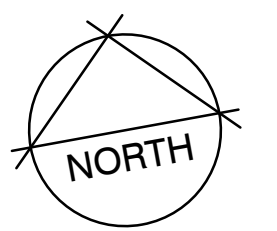
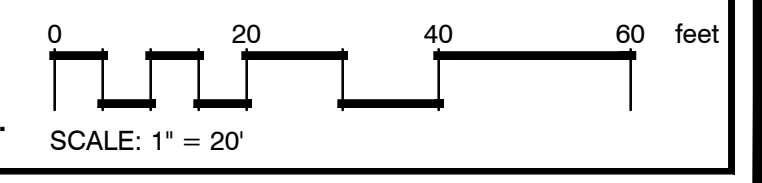
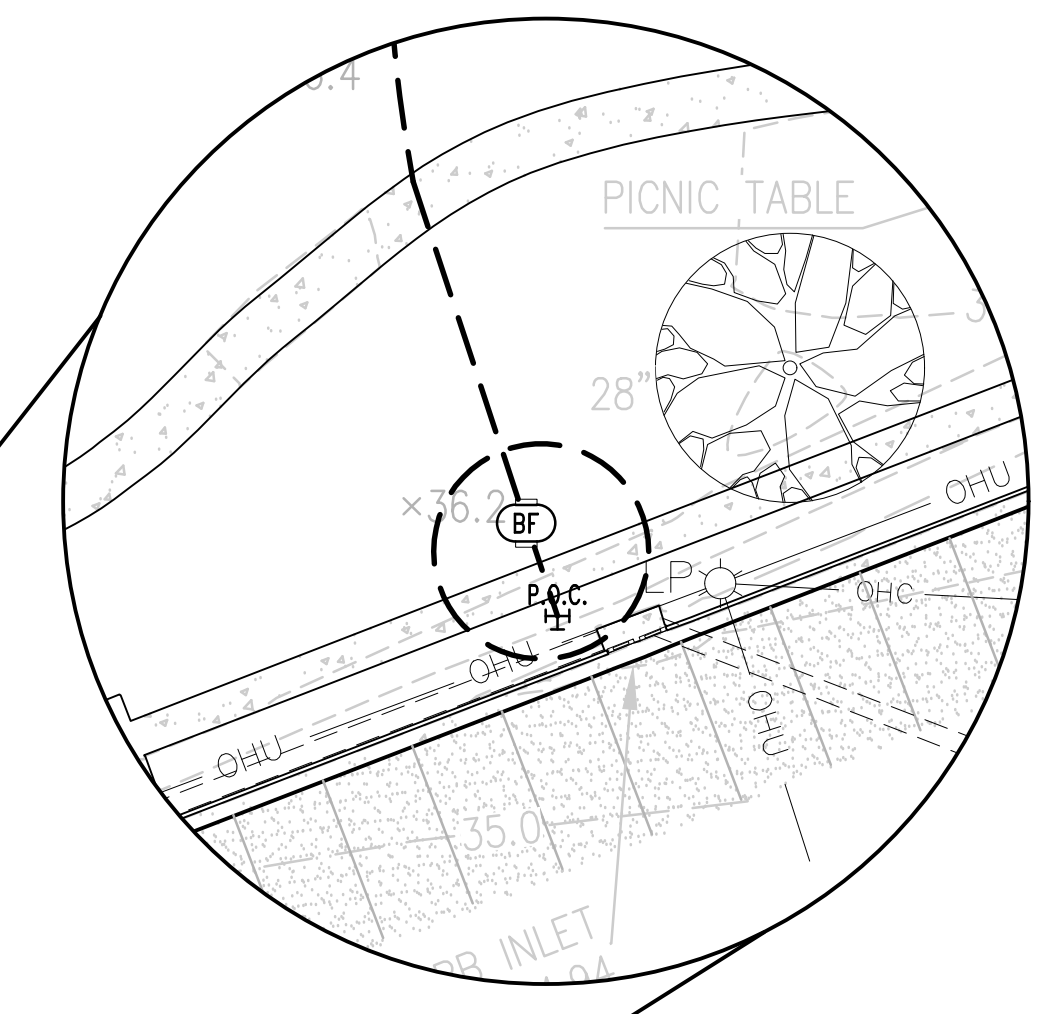


- NOTES:
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 8. Contractor shall obtain all required permits.
 9. Quantities are provided for convenience only. Contractor shall verify.
 10. Report any discrepancies to Landscape Architect immediately.

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2	1½" 61.6

3	1½" 61.6
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4	1½" 61.6
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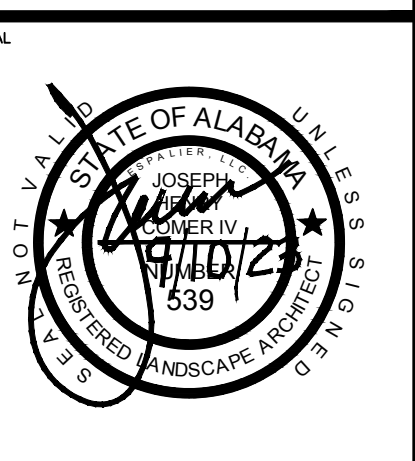
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Espalier, LLC
P.O. Box 1247
Fairhope, Alabama 36533
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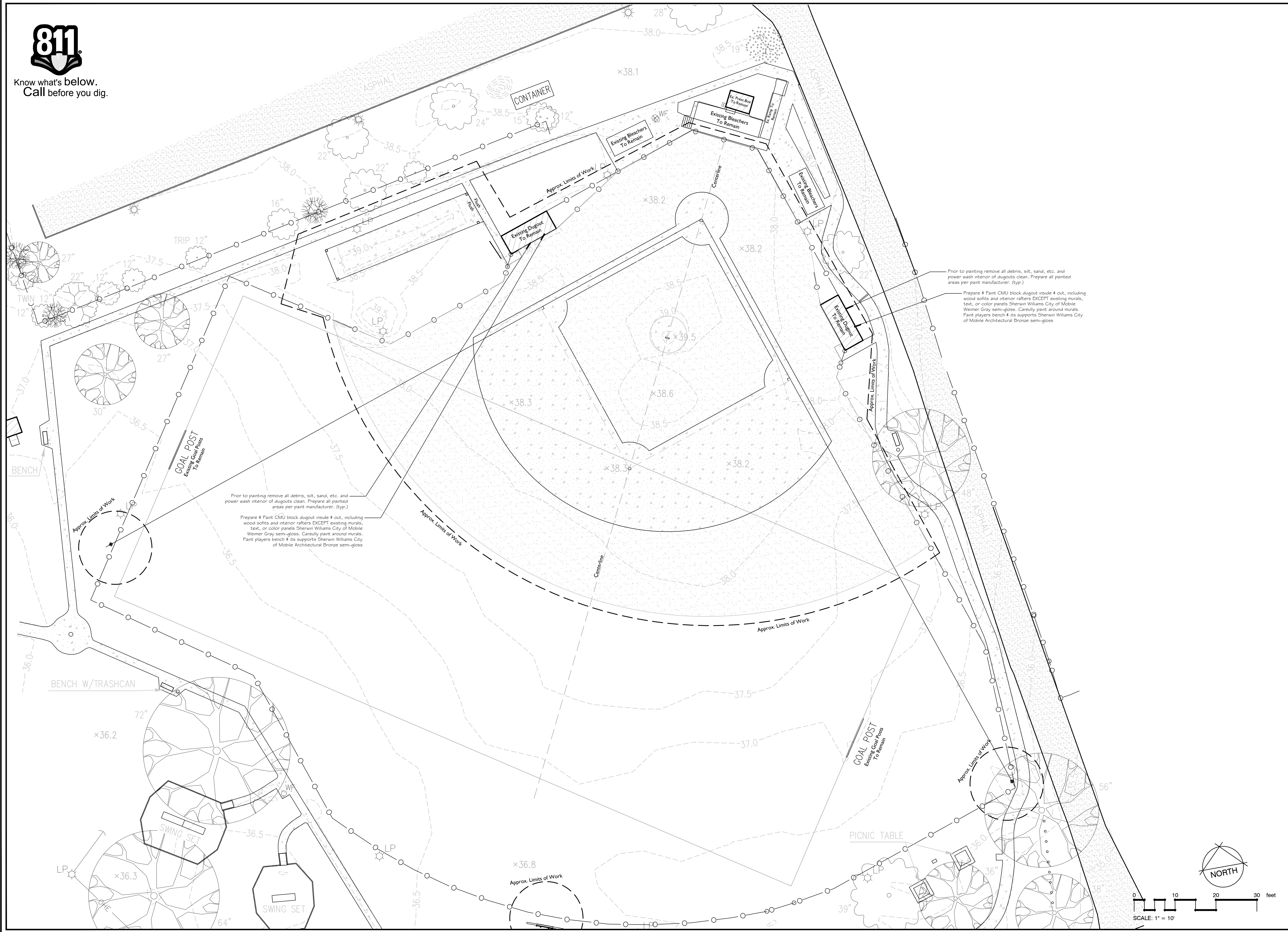
SHEET TITLE

FIELD IRRIGATION PLAN

DESIGNED BY JC	FILE NAME FIGLA
DRAWN BY JC	SHEET L-1.4
CHECKED BY JC	
PROJECT NO. 2316	
DATE 4/28/23	



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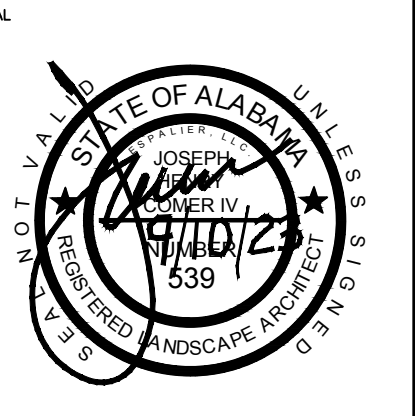


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FIGURES PARK

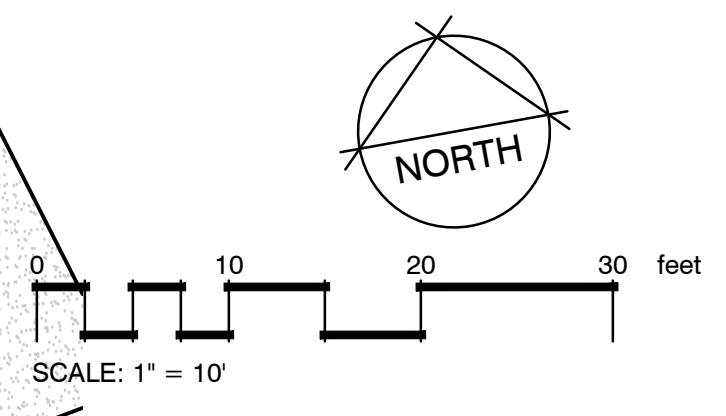
PR-066-22 -- Combo Field Improvements
658 Donald St. C, Mobile, AL 36617

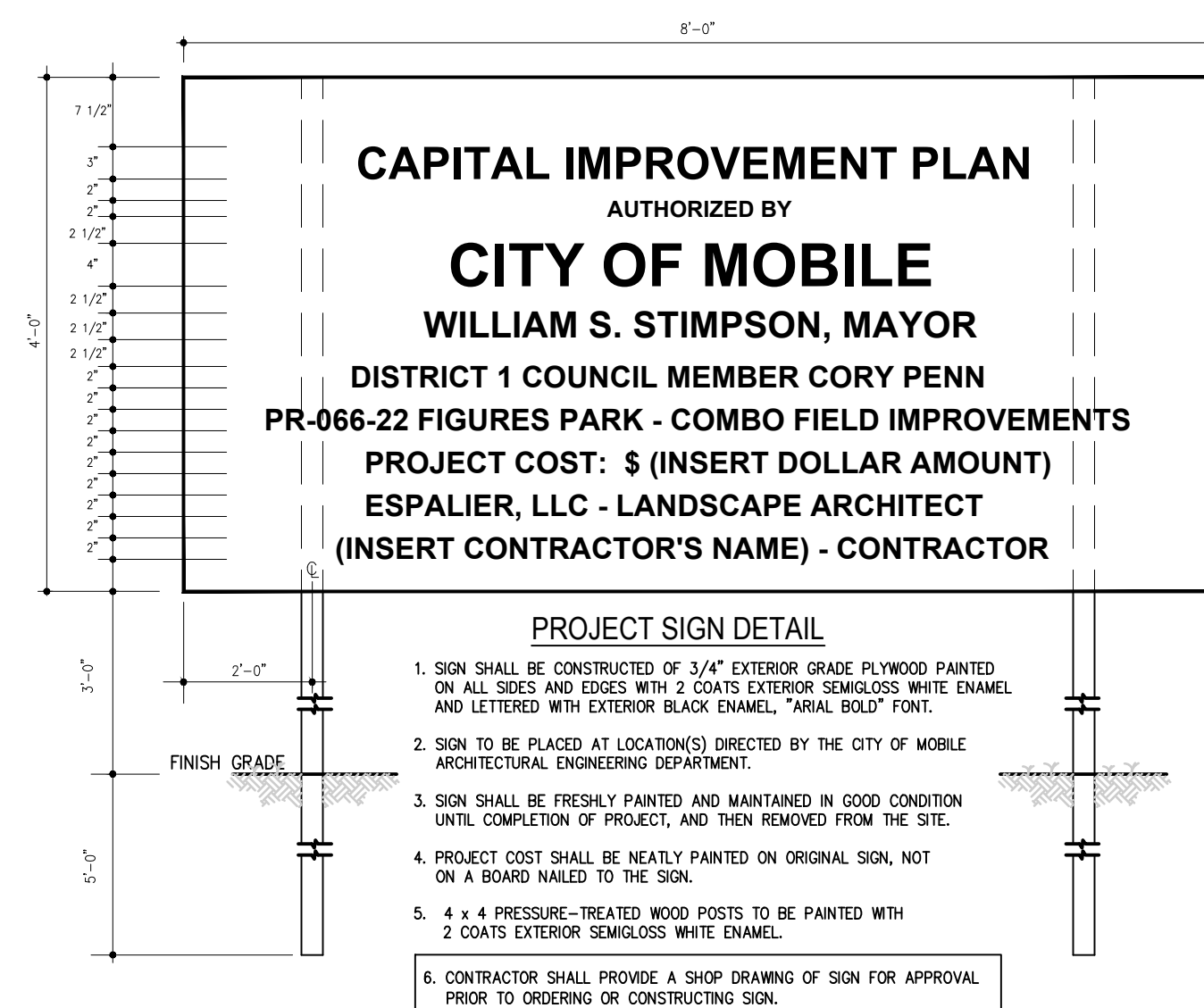


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98% Review 7/26/23 For Bid 9/10/23

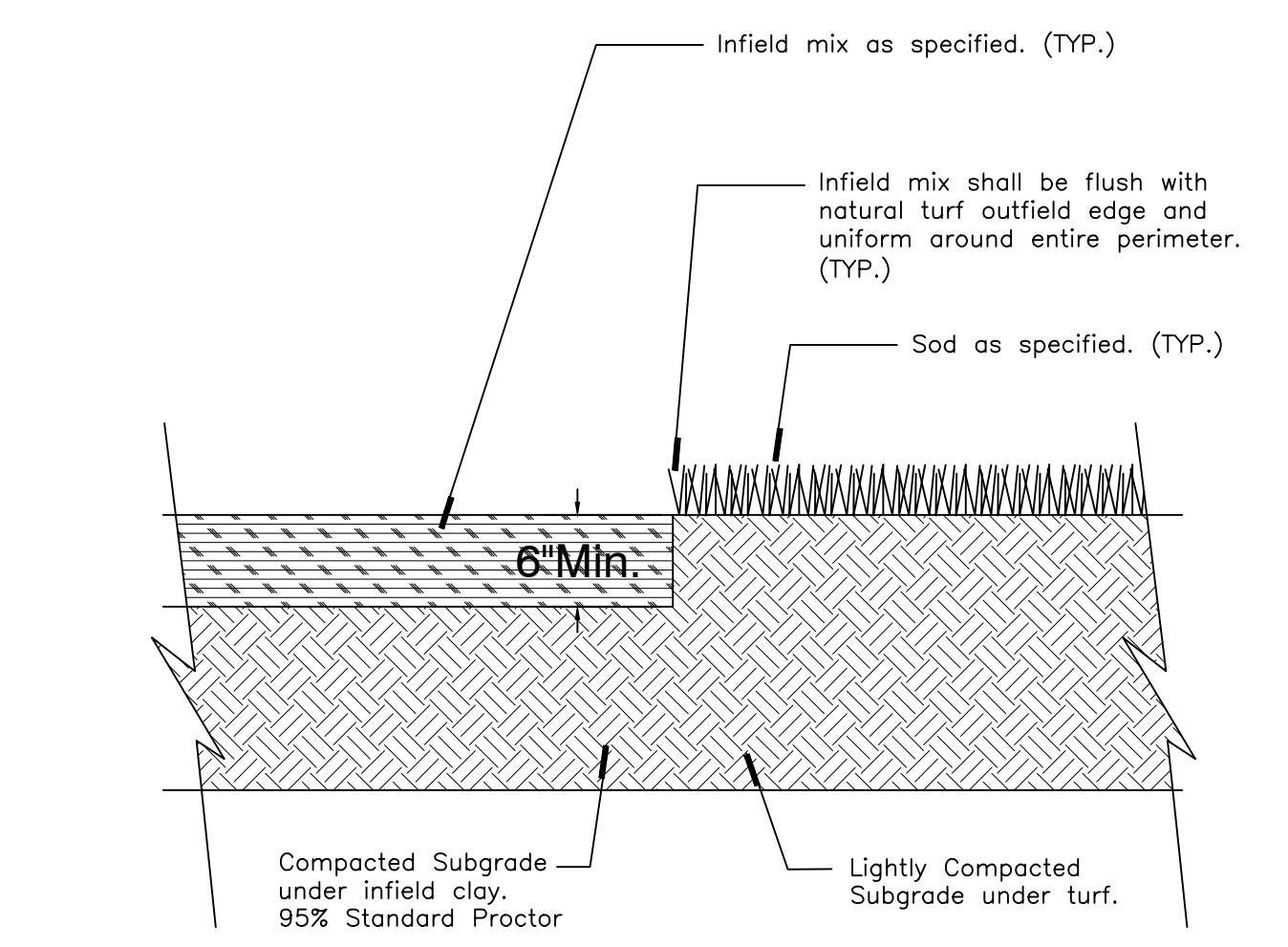
PAINTING PLAN

DESIGNED BY JC	FILE NAME FIGLA
DRAWN BY JC	SHEET L-1.5
CHECKED BY JC	PROJECT NO. 2316
DATE 7/12/23	

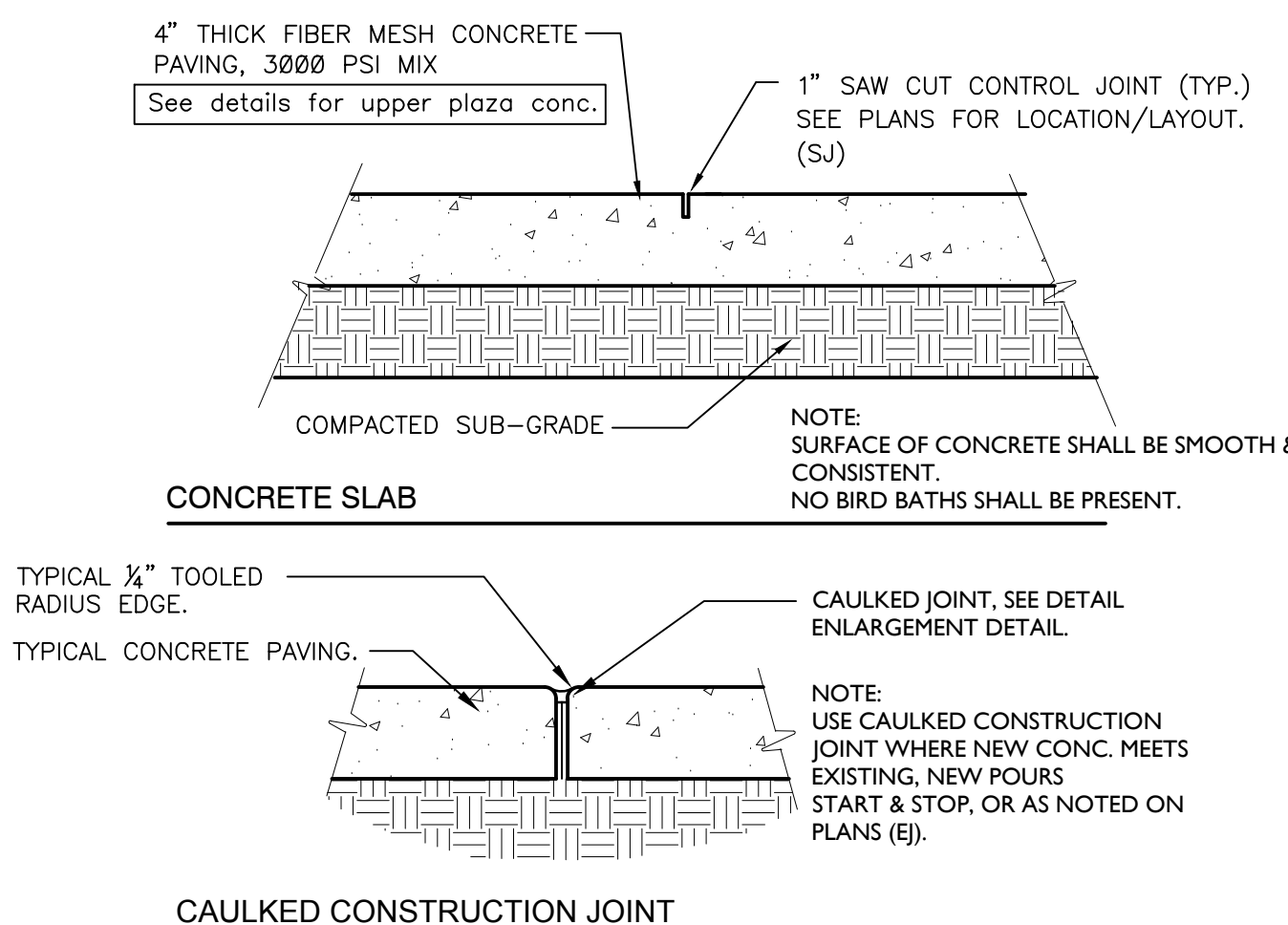




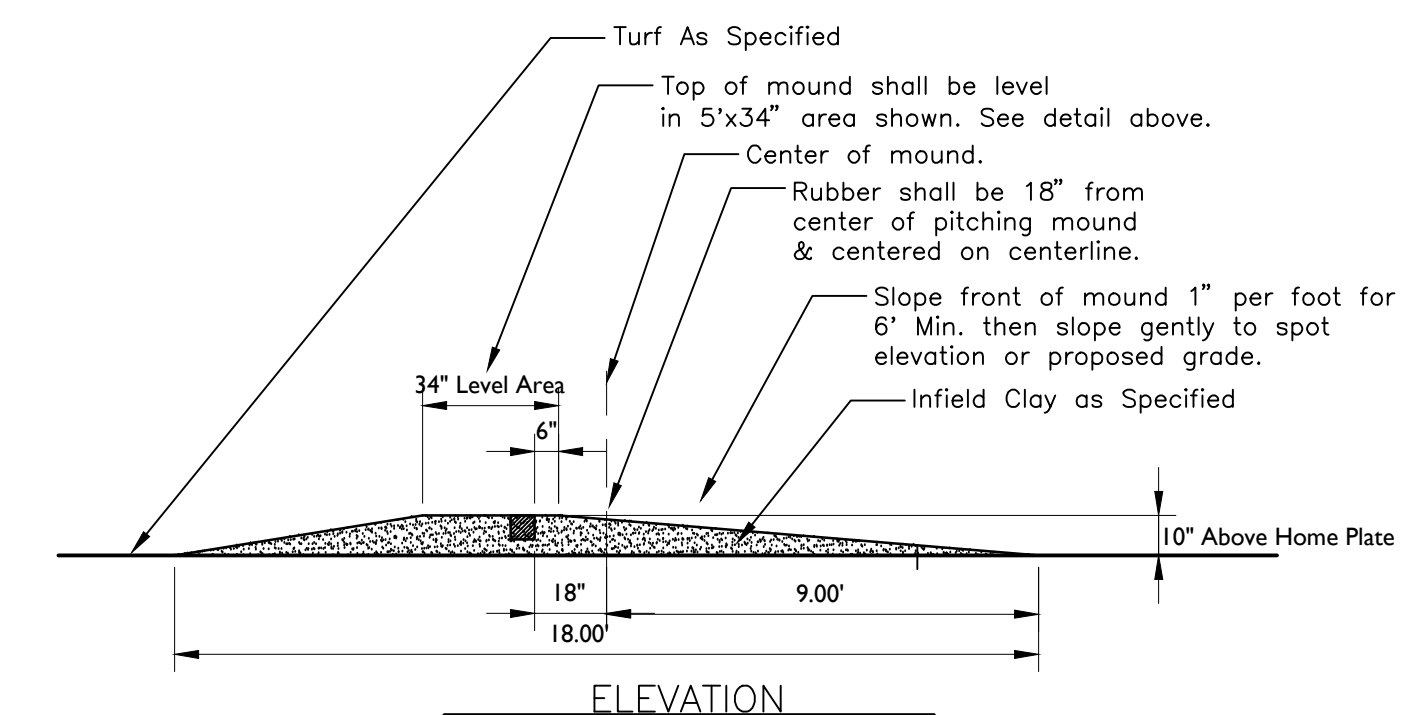
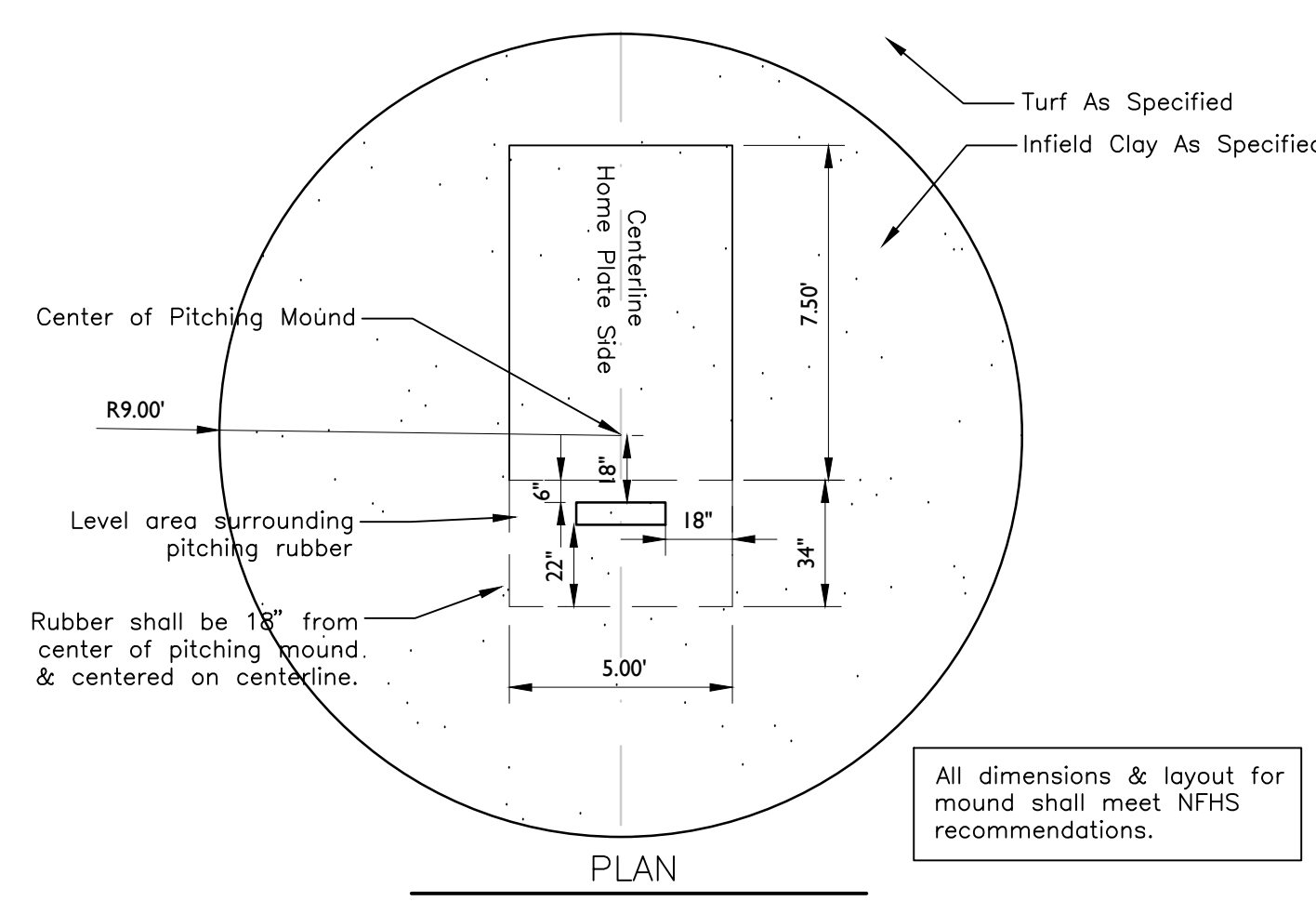
1 PROJECT SIGN DISTRICT 1
NOT TO SCALE P-CO-05



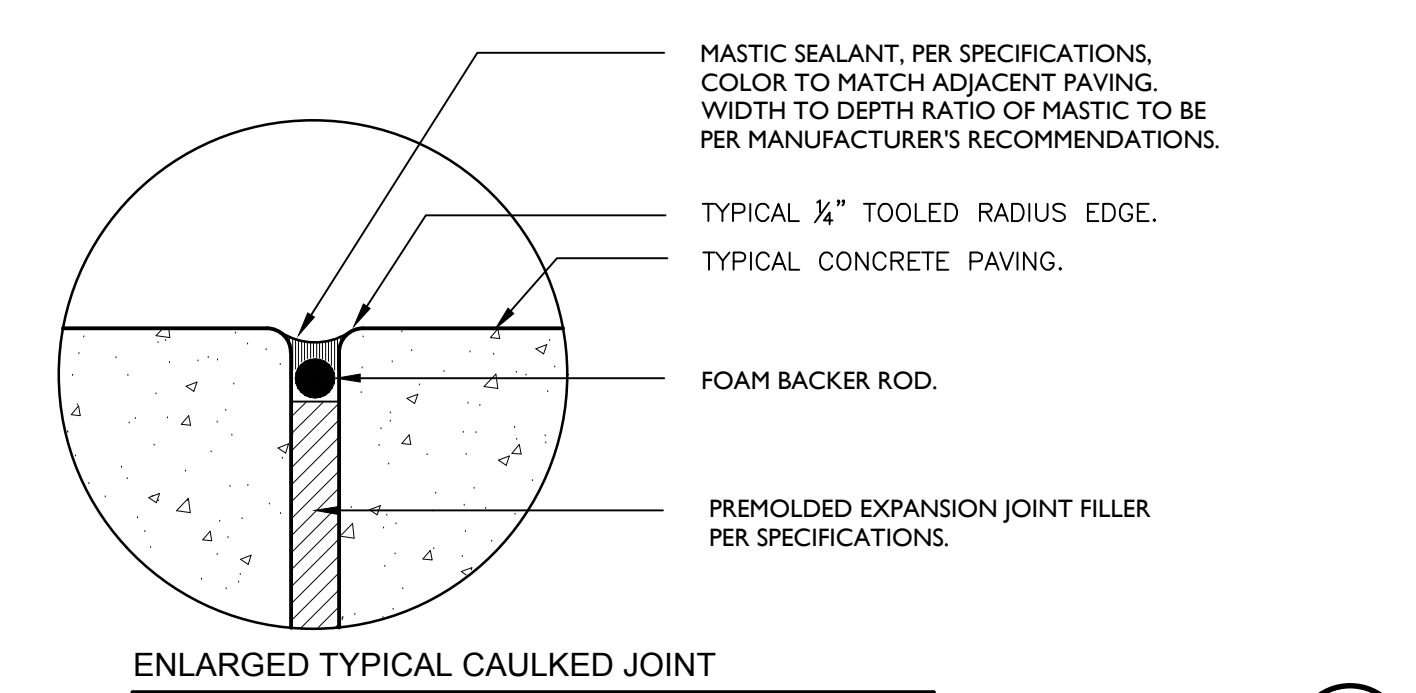
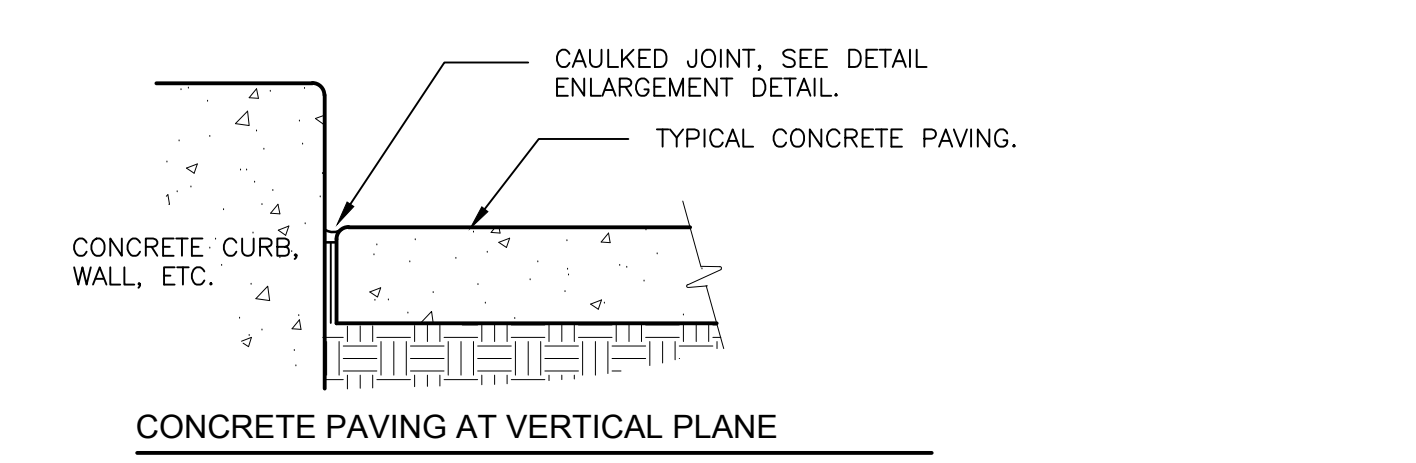
2 SKINNED INFIELD AT NATURAL TURF EDGE
1" = 1'-0" B-01



3 CONCRETE WALK / CONTROL JOINTS
1 1/2" = 1'-0" 321313.13-13



4 BASEBALL PITCHERS MOUND DETAIL
1/4" = 1'-0" B-07



5 FOUL POLE DETAIL
3" = 1'-0" P-CO-MIM-07

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION	QTY	DETAIL
1	Infield Clay Per Specifications.	11,301 sf	2/L-5.0
5	Clay Pitchers Mound. See details.		
ATHLETIC FIELD EQUIPMENT			
SYMBOL	DESCRIPTION	QTY	DETAIL
AE-101	Home Plate: Sportsfield Specialties Model# SHP-UM Hollywood MLB Universal Home Plate Stanton mount in ground anchor. Install per manufacturers recommendations. OR Approved Equal	1	
AE-102	Baseball Bases: Set of 3 Sportsfield Specialties Model # SHIBL Shutt hollywood Impact Bases. Install per manufacturers recommendations. OR Approved Equal	1	
AE-103	Pitching Rubber: Sportsfield Specialties Model# SHBBPB Fill tube with concrete. Install per manufacturers recommendations. OR Approved Equal	1	
AE-105	Batting Cage Frame and Netting: Net Connections Model # NC-BC1 Single Batting Cage System with 12 x15 x75' CNW #42 Knotted Nylon Netting Tunnel. Field verify all measurements. Install per manufacturers recommendations. Provide shop drawing. Contractor shall provide stamped footing design by AL licensed engineer as part of this work. Net Connections 205-948-7504 OR Approved Equal.	1	
AE-106	Scoreboard: Varsity Scoreboards Model # 3315 w/ Wireless Remote Control System. Color: Black Contractor shall include all mounting hardware to install on existing I-beam posts for a 100% operating scoreboard. Licensed electrician shall replace existing disconnect switch at scoreboard post & provide new wiring from disconnect to scoreboard. Verify scoreboard model with Owner/LA Prior to Ordering.	1	
AE-107	Baseball Foul Pole: Sportsfield Specialties Model #: FP630PL 30' Foul Pole. Color Yellow. Contractor shall provide footing design stamped by a AL licensed engineer as part of this work. Install per manufacturers recommendations OR Approved Equal	2	5/L-5.0
CONCRETE PAVING			
SYMBOL	DESCRIPTION	QTY	DETAIL
C-101	Concrete Batting Cage Slab. See Plan for location & dimensions.	1,217 sf	3/L-5.0

PLANT SCHEDULE

GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
	CT	30,043 sf	Cynodon dactylon 'Tif 419'	Tifton 419 Bermuda Sod	sod		

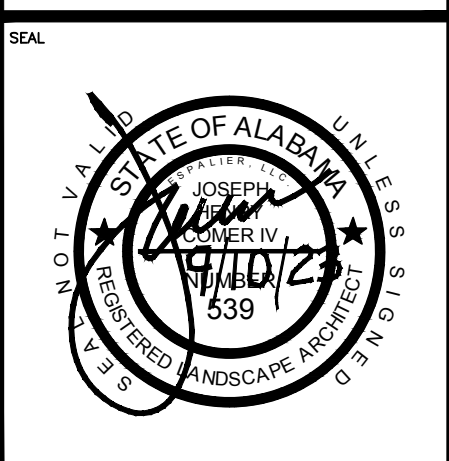
NOTES:
1. Quantities are for convenience only. Contractor shall verify.
2. All areas disturbed by construction shall be sodded and hand watered until established.



Espalier, LLC
P.O. Box 1247
Fairhope, Alabama 36533
P: 251.454.3500
espalierdesign.com

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FIGURES PARK
PR-066-22 -- Combo Field Improvements
658 Donald St. C, Mobile, AL 36617

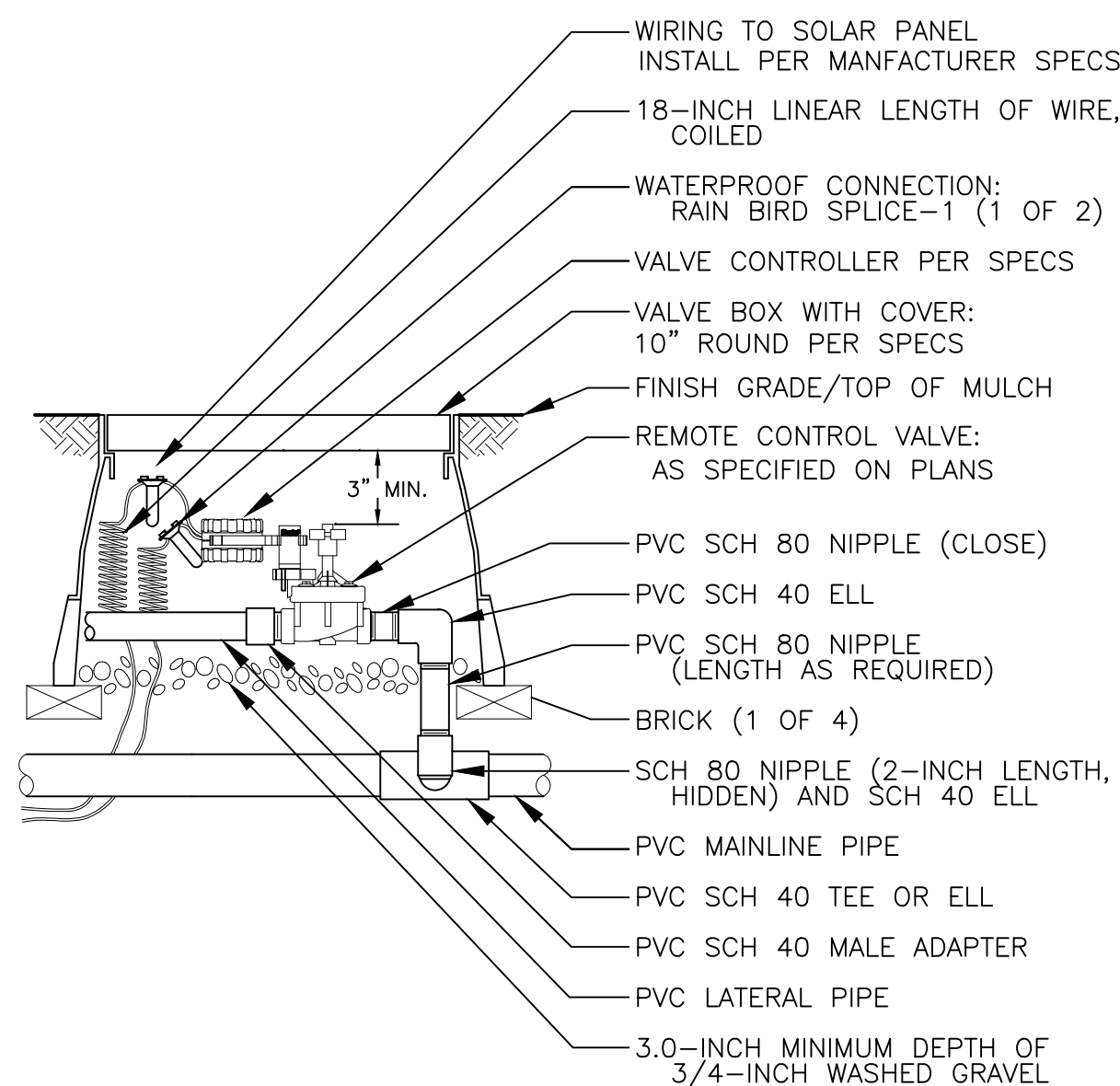


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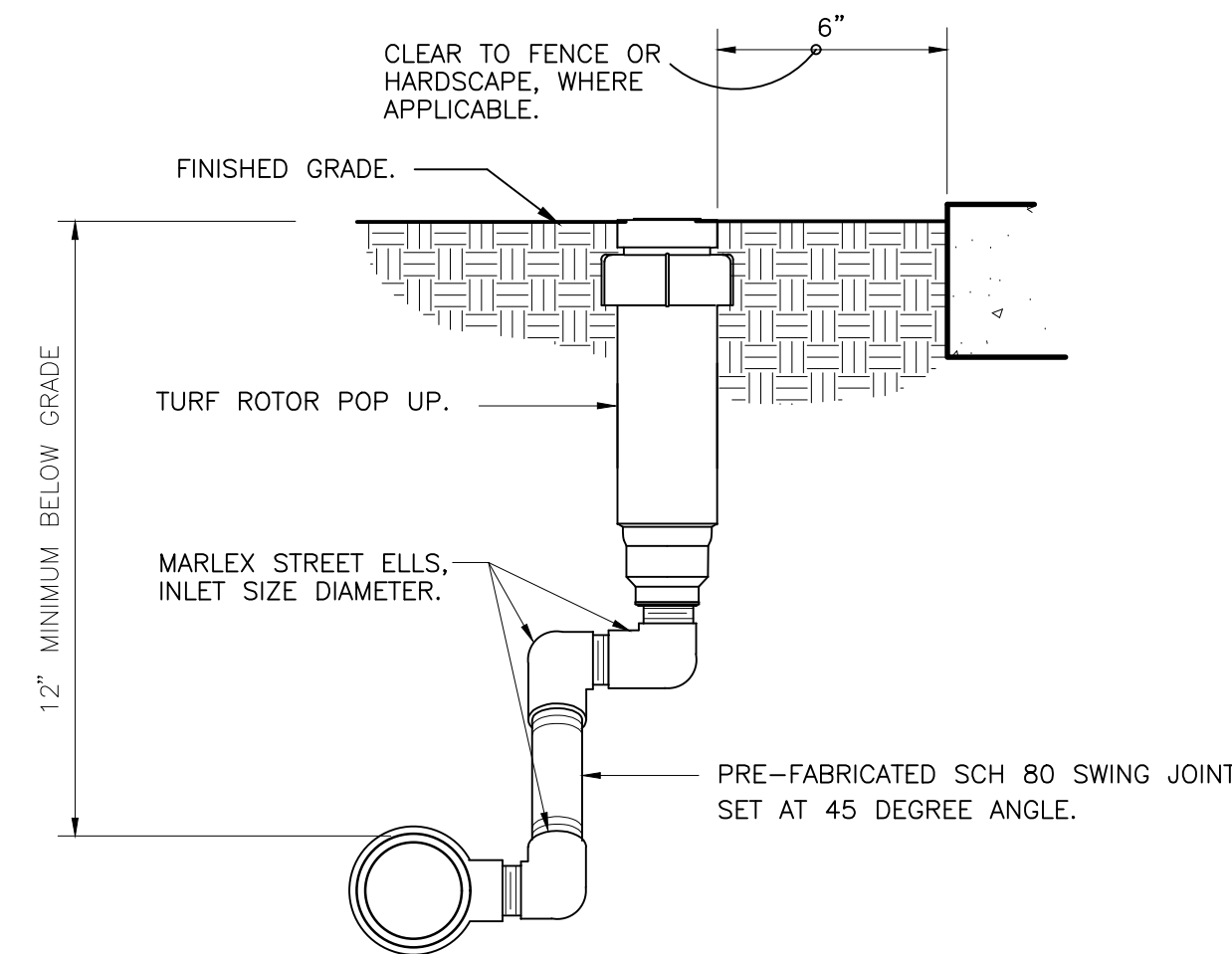
30% Review	6/2/23
98% Review	7/26/23
For Bid	9/10/23

FIELD DETAILS

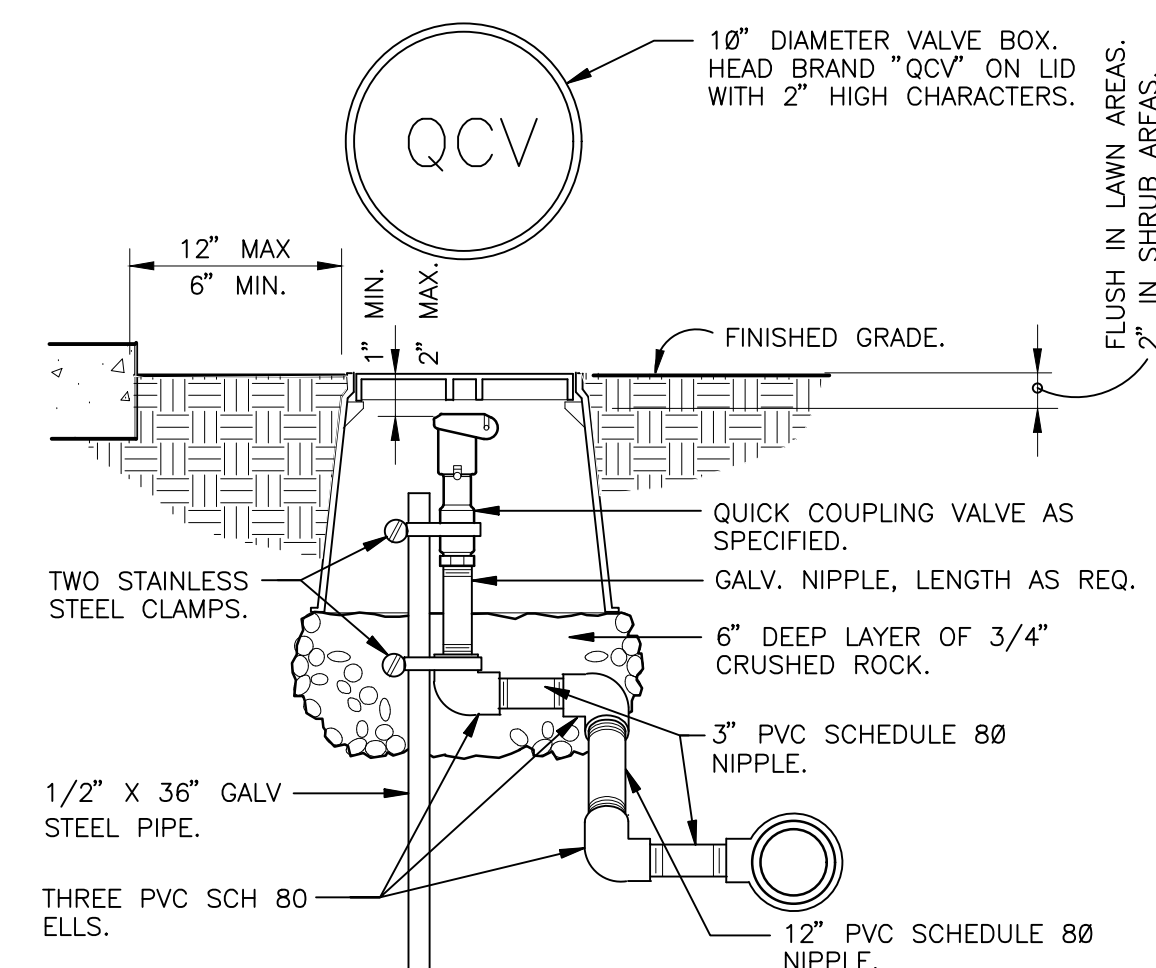
DESIGNED BY JC	FILE NAME FIGLA
DRAWN BY JC	SHEET
CHECKED BY JC	
PROJECT NO. 2316	L-5.0
DATE 5/31/23	



1 ELECTRIC REMOTE-CONTROL VALVE - BATTERY
N.T.S. IR-15



2 TURF ROTOR MARLEX ASSEMBLY
3" = 1'-0" IR-03



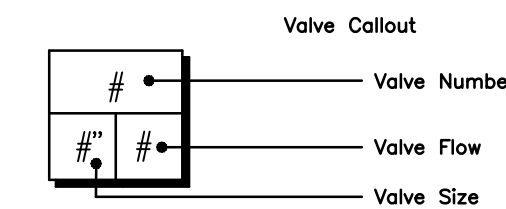
3 QUICK COUPLING VALVE IN BOX
1 1/2" = 1'-0" 328406.43-02

- IRRIGATION NOTES**
1. THIS PLAN IS SCHEMATIC IN NATURE. LINES/MATERIALS ARE DRAW OFFSET FOR CLARITY. INSTALL ALL IRRIGATION LINES IN LANDSCAPED AREAS OR AS NOTED ON PLANS.
 2. REFER TO LANDSCAPE PLANS TO AVOID TREE ROOTBALLS AND TO INSTALL HEADS IN APPROPRIATE LOCATIONS.
 3. ADJUST ALL NOZZLES TO PREVENT OVERSPRAY ON PAVING, WALLS, BUILDINGS, WINDOWS, ETC.
 4. SET SPRAYS AND ROTORS FLUSH WITH TOP OF MULCH OR TOP OF SOD LEVELS.
 5. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR CALLING LINE LOCATE AND AVOIDING ALL UTILITIES. DAMAGED UTILITIES SHALL BE REPAIRED AT NO COST TO OWNER.
 6. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, LICENSES, AND ASSOCIATED FEES.
 7. IRRIGATION CONTRACTOR SHALL ABIDE BY ALL FEDERAL, STATE AND LOCAL BUILDING CODES AND LAWS.
 8. MAINLINE TO BE BURIED A MINIMUM OF 18", AND LATERAL LINES 12" MIN.
 9. ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE AGAINST ALL DEFECTS IN EQUIPMENT AND WORKMANSHIP.
 10. CONTRACTOR TO PROVIDE IRRIGATION AS-BUILT DRAWING PRIOR TO CLOSEOUT ALONG WITH ALL OWNERS AND OPERATION MANUALS.
 11. NO WORK SHALL TAKE PLACE IN THE R.O.W. WITHOUT APPROVAL OF GOVERNING AUTHORITY.

4 IRRIGATION NOTES
N.T.S. IR-12

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	GPM	RADIUS	DETAIL
ⓑ	Rain Bird F4-PC, FC 18 Turf Rotor, 4.0" Pop-Up, Plastic Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet.	15	50	15.4	59'	2/L-5.1
Ⓢ	Rain Bird PEB 1-1/2" 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability. Globe Configuration. Install in Carson or Equal 10" Round Valve Box. See detail.	4				1/L-5.1
Ⓢ	Rain Bird 5-LRC 1" 1" Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Locking Thermoplastic Rubber Cover, and 1-Piece Body. Provide one valve key & hose swivel to owner. Install in 10" round valve box.	1				3/L-5.1
Ⓛ	Watts 007 1-1/2" max. flow rate is 7.5 f/s. Install in Jumbo Meter Box flush with grade.	1				
Ⓛ	Hunter NODE-600 6-Station Controller, Outdoor, Battery Powered. DC Latching Solenoid Ordered Separately. Wire each valve with single strand #12 copper irrigation wire.	1				
P.O.C.	New 1.5" Irrigation Meter Contractor shall purchase & coordinate the installation of new irrigation meter & backflow preventer as per MAWSS. System design assuming 70 GPM @ 75 PSI. Contractor shall verify meter capacity.	1				
---	Irrigation Lateral Line: PVC Class 200 SDR 21 1"	325.5 l.f.				
---	Irrigation Lateral Line: PVC Class 200 SDR 21 1 1/2"	178.0 l.f.				
---	Irrigation Lateral Line: PVC Class 200 SDR 21 2"	149.4 l.f.				
---	Irrigation Lateral Line: PVC Class 200 SDR 21 2 1/2"	216.4 l.f.				
---	Irrigation Mainline: PVC Schedule 40 2"	6.1 l.f.				
---	Irrigation Mainline: PVC Schedule 40 2 1/2"	416.7 l.f.				

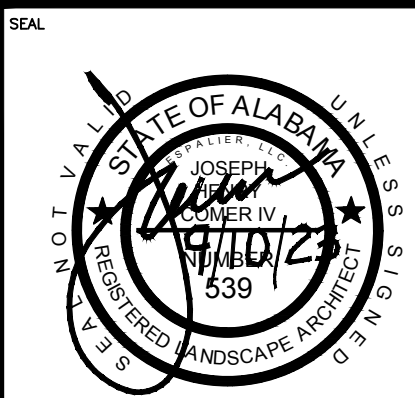


- NOTES:**
1. QUANTITIES ARE FOR CONVENIENCE ONLY. CONTRACTOR TO VERIFY.

IRRIGATION NOTES:

1. CONTRACTOR TO VERIFY METER CAPACITY.
2. SYSTEM IS DESIGNED ASSUMING 70 GPM @ 75 PSI IS AVAILABLE.
3. CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT BEFORE INSTALLING ANY IRRIGATION IF AVAILABLE CAPACITY DOES NOT MEET DESIGNED FLOWS.

IRRIGATION SYSTEM WILL NOT WORK PROPERLY IF DESIGNED FLOW AND PSI IS NOT MET.

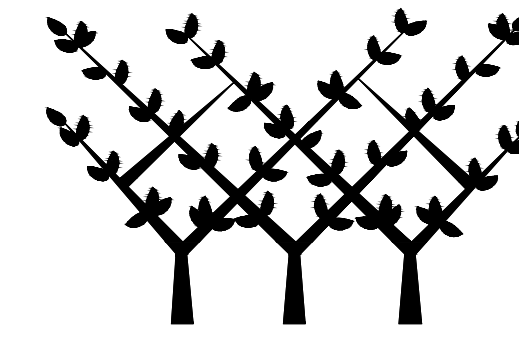


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For Bid 9/10/23

IRRIGATION DETAILS

DESIGNED BY JC	FILE NAME FIGLA
DRAWN BY JC	SHEET
CHECKED BY JC	
PROJECT NO. 2316	L-5.1
DATE 5/31/23	



ESPALIER
landscape architecture

Espalier, LLC
P.O. Box 1247
Fairhope, Alabama 36533
P: 251.454.3500
espalierdesign.com

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TRINITY GARDENS PARK

3100 Bank Ave. - Mobile, AL 36617

Combo Field Improvements

PROJECT# PR-040-22

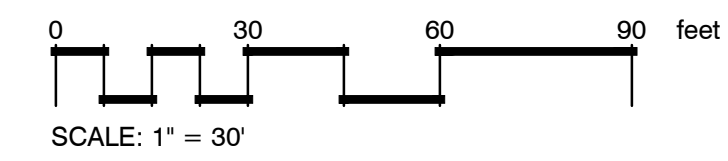
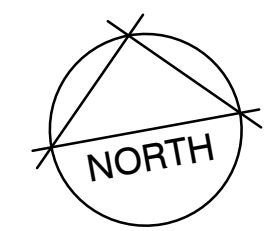
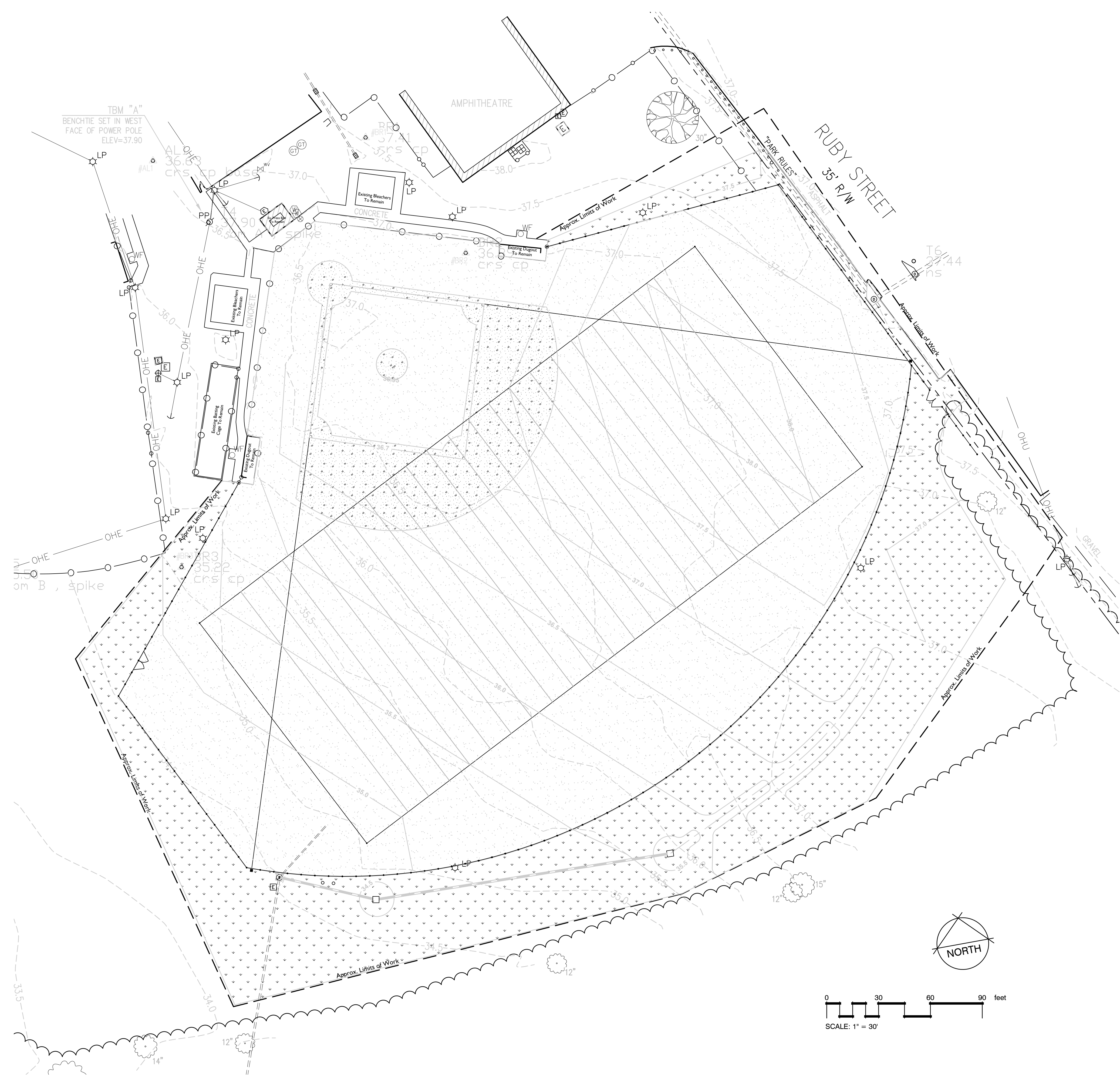
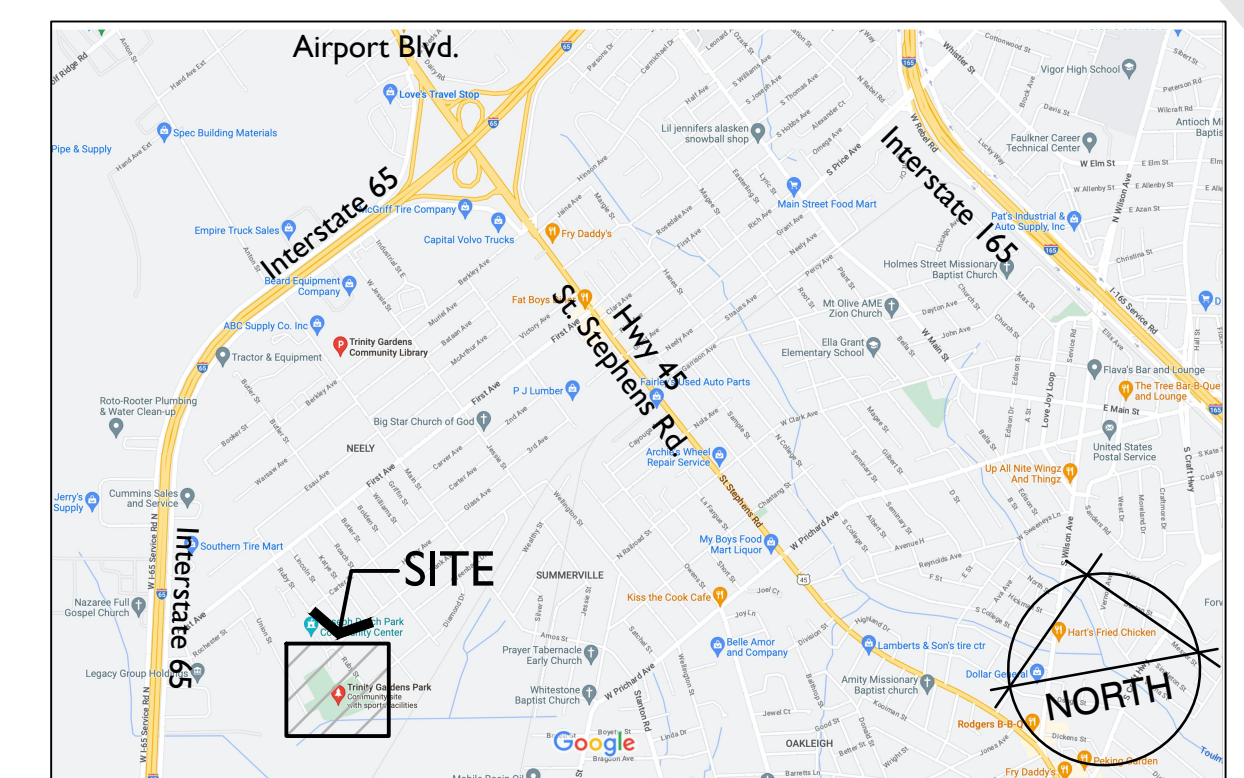
Prepared for:
The City of Mobile Alabama
Architectural Engineering Department
P.O. Box 1827 - Mobile, AL 36633-1827

Landscape Architect:
Espalier Landscape Architecture
P.O. Box 1247 - Fairhope, AL 36533
251-454-3500

Civil Engineer:
S.E. Civil Engineering
9969 Windmill Road
Fairhope, AL 36532
251-990-6566

SHEET INDEX

SHEET	DESCRIPTION
I-1	Survey
I-2	Demolition Plan
C01	Grading & Drainage Plan
C02	Erosion & Sediment Control Plan
C03	Construction Details
C04	Construction Details
L-1.2	Field Layout
L-1.3	Infield Enlargement
L-2.0	Irrigation Plan
L-5.0	Field Details
L-5.1	Irrigation Details

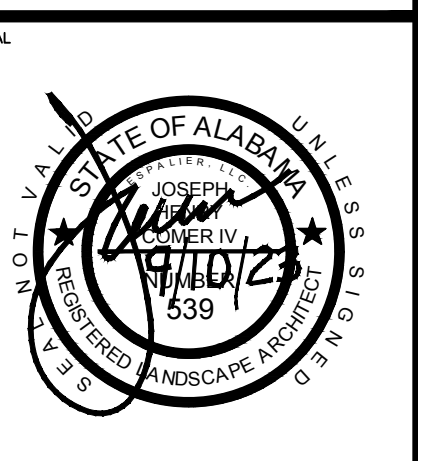


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TRINITY GARDENS PARK

PR-040-22 -- COMBO FIELD IMPROVEMENTS
3100 BANK AVE., MOBILE, AL

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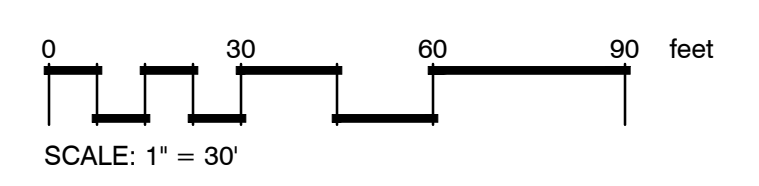
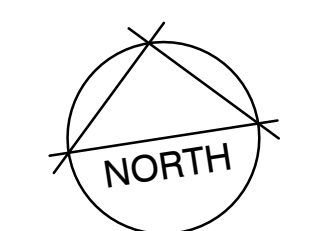
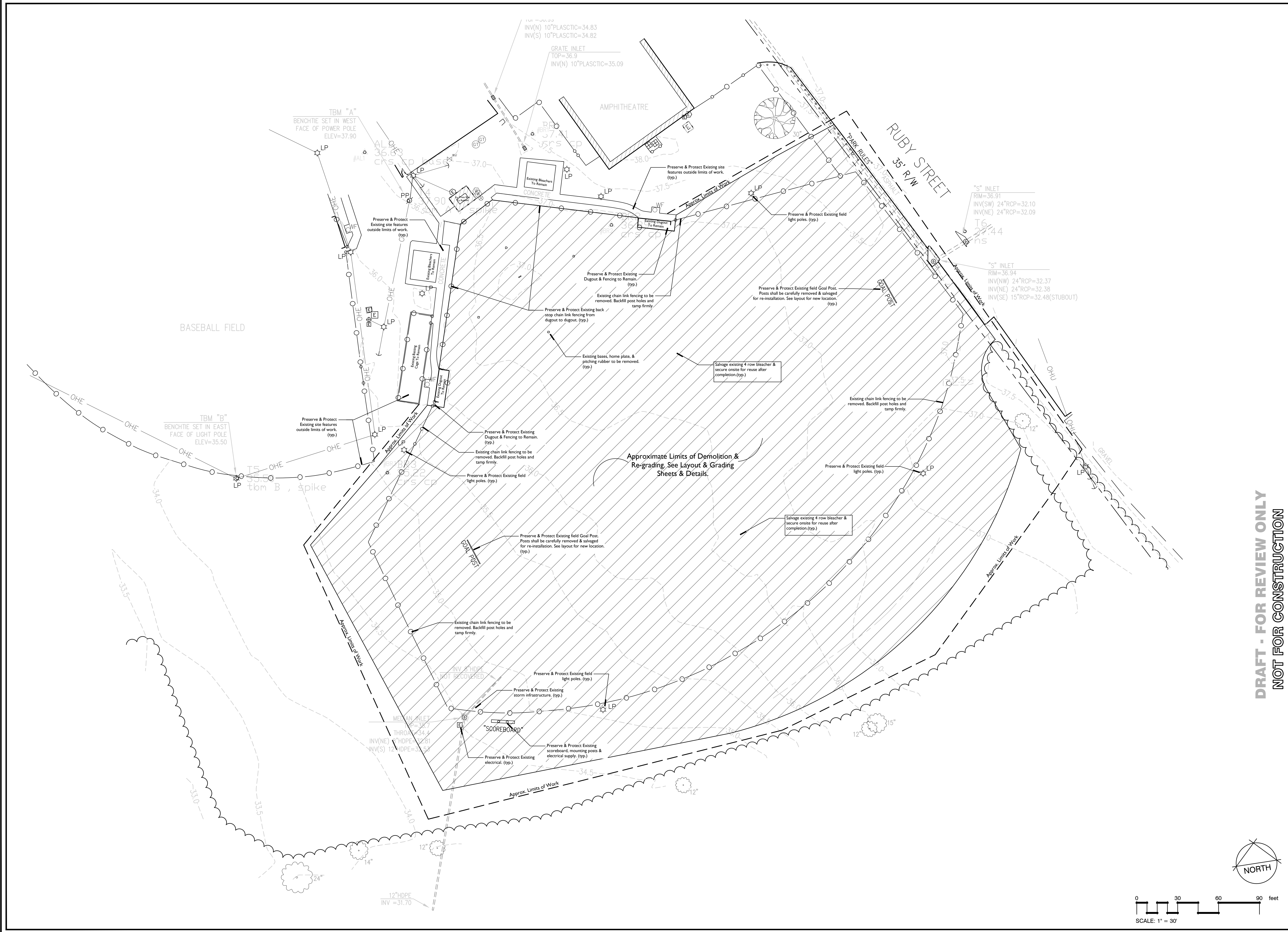


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30% Review 6/2/23
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For Bid 9/10/23

SHEET TITLE

DEMOLITION PLAN

DESIGNED BY JC	FILE NAME TRINILA
DRAWN BY JC	SHEET 1.1
CHECKED BY JC	
PROJECT NO. 2316-2	
DATE 5/31/23	



REFERENCE NOTES SCHEDULE

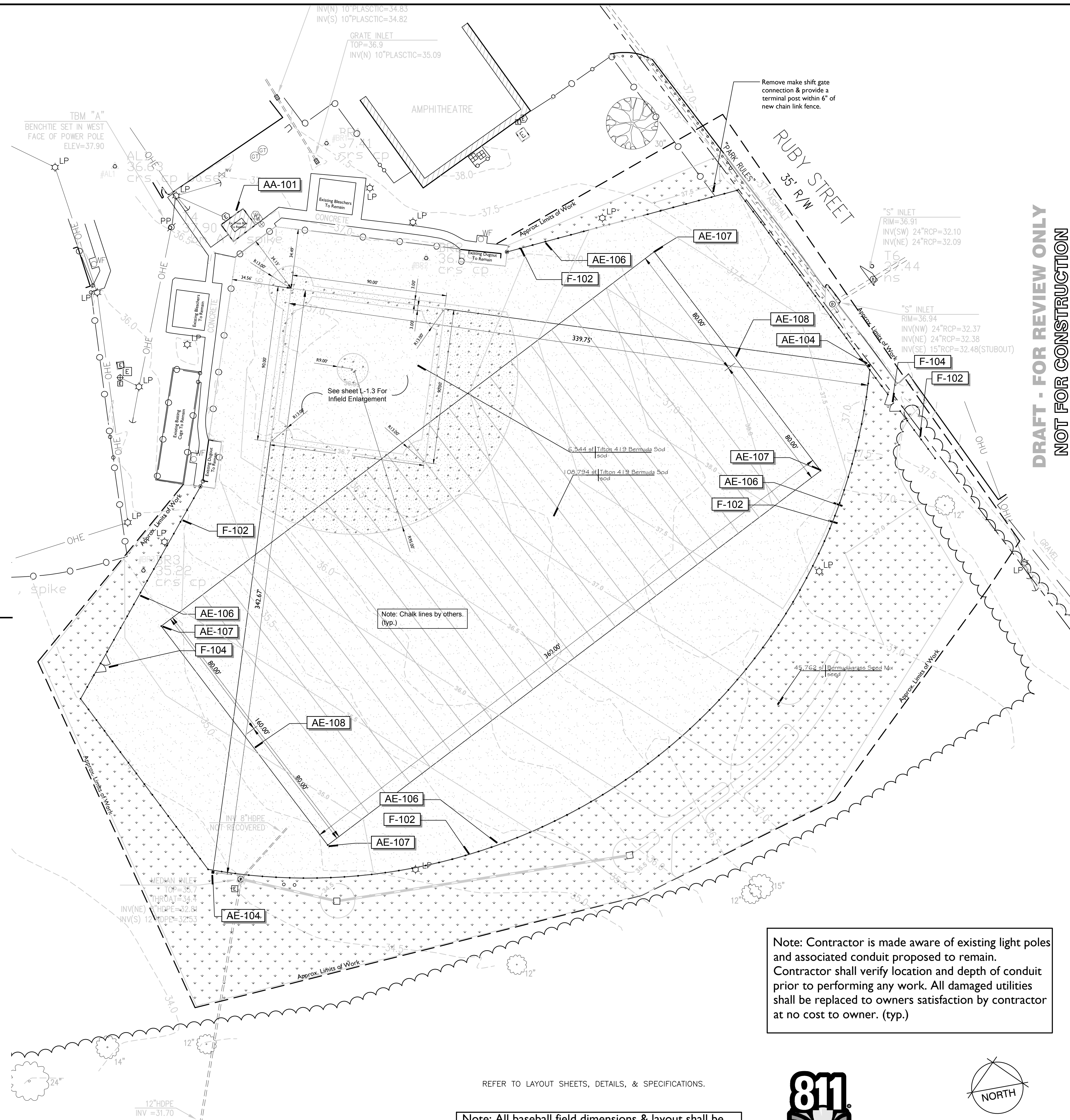
SYMBOL	DESCRIPTION	QTY	DETAIL
1	Infield Clay Per Specifications.	11,302 sf	3/L-5.0
2	Clay Pitchers Mound. See details.		
ADD ALTERNATES			
SYMBOL	DESCRIPTION	QTY	DETAIL
AA-101	ADD ALTERNATE #1: Repair/Replace press box siding on SW side to match existing & Properly prepare and paint entire press box including eves Wiener Gray on three sides and black on back stop side.		
ATHLETIC FIELD EQUIPMENT			
SYMBOL	DESCRIPTION	QTY	DETAIL
AE-101	Home Plate: Sportsfield Specialties Model# SHP-UM Hollywood MLB Universal Home Plate Station mount in ground anchor. Install per manufacturers recommendations. OR Approved Equal	1	
AE-102	Baseball Bases: Set of 3 Sportsfield Specialties Model # SHIBL Shurt hollywood Impact Bases. Install per manufacturers recommendations. OR Approved Equal	1	
AE-103	Pitching Rubber: Sportsfield Specialties Model# SHBPPB Fill tube with concrete. Install per manufacturers recommendations. OR Approved Equal	1	
AE-104	Baseball Foul Pole: Sportsfield Specialties Model #: FP630PL 30' Foul Pole. Color Yellow. Contractor shall provide footing design stamped by a AL licensed engineer as part of this work. Install per manufacturers recommendations OR Approved Equal	2	2/L-5.0
AE-106	Saf-Top Fence Guard: Color: Yellow Install from dugout gate to dugout gate. Fasten per manufacturers instructions. Net Connection 205-948-7504	1,071 lf	
AE-107	PlexiFix Field Corner Markers. Set flush with grade. Center on each corner of football field and each side at 50 YD line. (6 total) Color: Yellow	4	
AE-108	Portable Football Goal Posts: Wizard Sports Portable 3.5" Aluminum Roll-away Goal Post Model: WZ-WV2210HS 888-964-5425	2	
FENCING			
SYMBOL	DESCRIPTION	QTY	DETAIL
F-102	6' Black Vinyl Chain Link Fence: Master Halco Permafused Fabric 8 GA Finish, Type 1 Spectra Framework, Steel Ties, Knuckle Selvage Top & Bottom of Fabric, Sch 40 Posts. See plan for gate locations. Provide shop drawings for approval. OR Approved Equal	1,175 lf	5/L-5.0
F-104	New 6' Tall double 6' wide access gate to match proposed fence. See plan for quantity.	2	5/L-5.0

PLANT SCHEDULE

GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
	CD	45,762 sf	Cynodon dactylon	Bermudagrass Seed Mix	seed		Refer to erosion control plan for permanent seed mix.
	CT	115,338 sf	Cynodon dactylon 'Tif 419'	Tifton 419 Bermuda Sod	sod		

NOTES:
1. QUANTITIES ARE FOR CONVENIENCE ONLY. CONTRACTOR TO VERIFY.

- NOTES:
- Survey provided by owner.
 - Field verify all layout and dimensions prior to construction.
 - Field verify location of all structures, hardscape, utilities, drainage, vegetation, & conditions.
 - Contractor shall be responsible for all site layout using a licensed surveyor.
 - Contractor shall be responsible to preserve and protect all existing conditions to remain.
 - Contractor is responsible for calling line locate and verifying presence of any & all utilities. Utilities shown are for information only.
 - Contractor is responsible for ensuring positive drainage.
 - Contractor shall obtain all required permits.
 - Quantities are provided for convenience only. Contractor shall verify.
 - Report any discrepancies to Landscape Architect immediately.



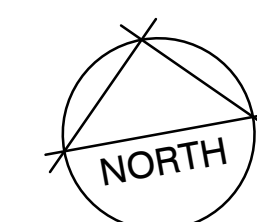
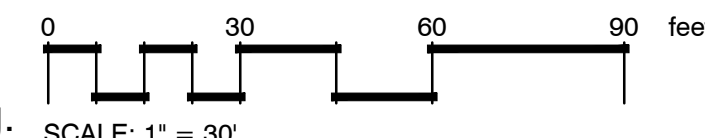
REFER TO LAYOUT SHEETS, DETAILS, & SPECIFICATIONS.

Note: All baseball field dimensions & layout shall be per the current NFHS Rules & Alabama Highschool Sports Rules. (typ.)

Note: Contractor is made aware of existing light poles and associated conduit proposed to remain. Contractor shall verify location and depth of conduit prior to performing any work. All damaged utilities shall be replaced to owners satisfaction by contractor at no cost to owner. (typ.)



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Call before you dig.



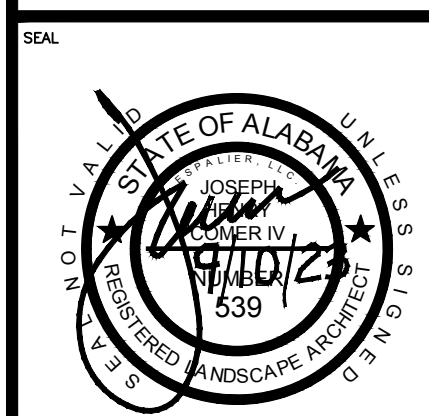
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3100 BANK AVE., MOBILE, AL



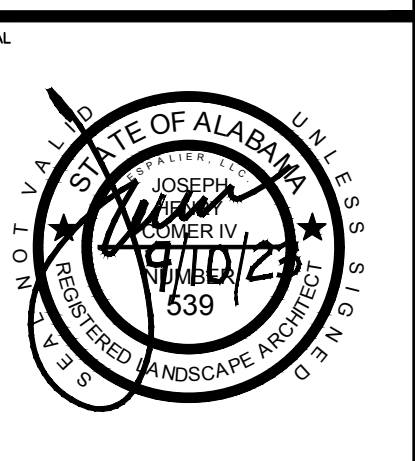
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30% Review	6/2/23
98% Review	7/26/23
For Bid	9/10/23

FIELD LAYOUT PLAN

DESIGNED BY JC	FILE NAME TRINLA
DRAWN BY JC	SHEET
CHECKED BY JC	
PROJECT NO. 2316-2	L-1.2
DATE 5/31/23	

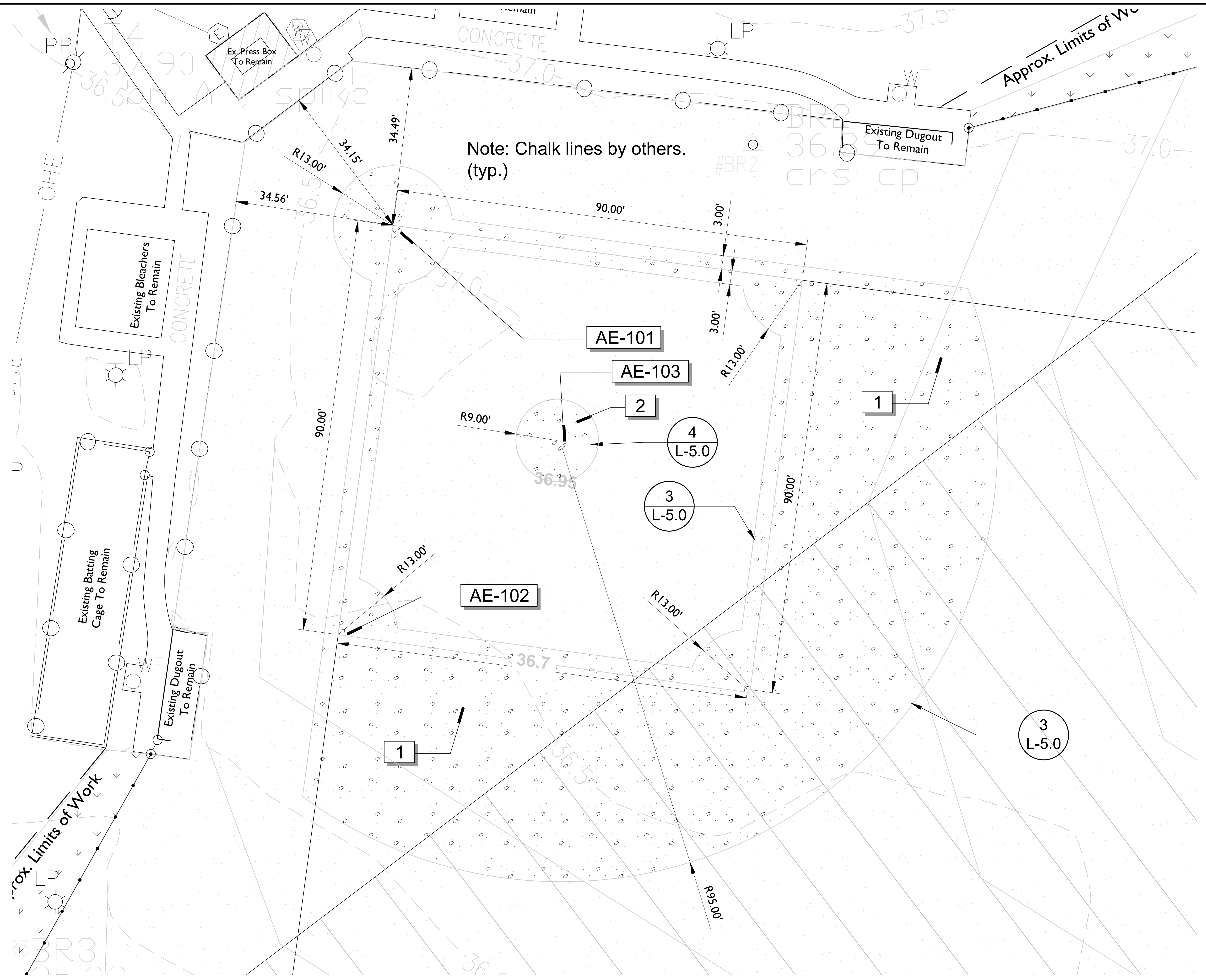
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3100 BANK AVE., MOBILE, AL



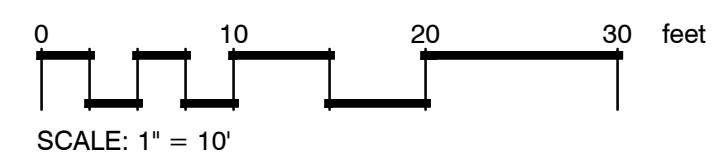
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SHEET TITLE
INFIELD ENLARGEMENT

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DRAWN BY JC	SHEET L-1.3
CHECKED BY JC	PROJECT NO. 2316-2
DATE 5/31/23	



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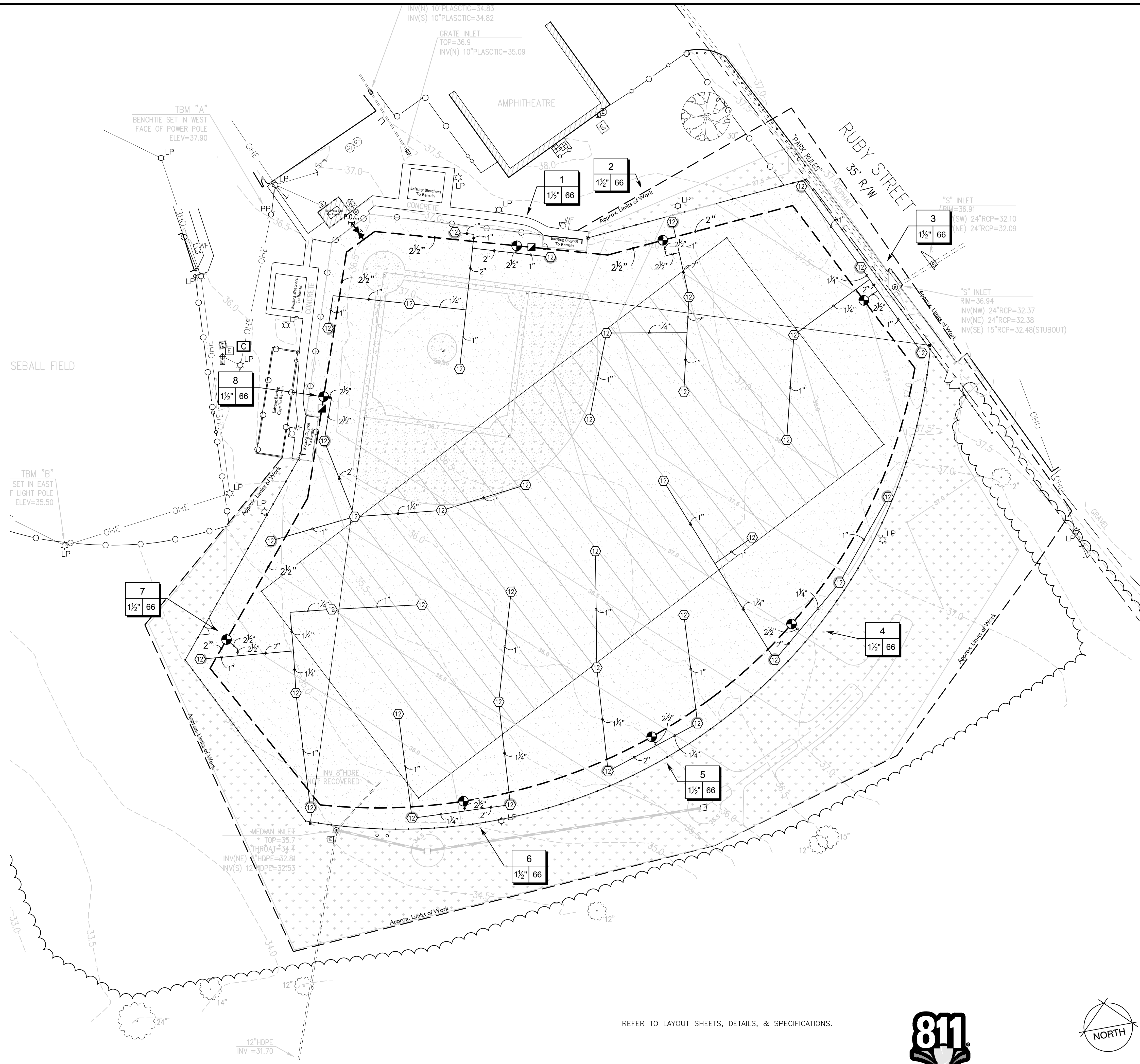


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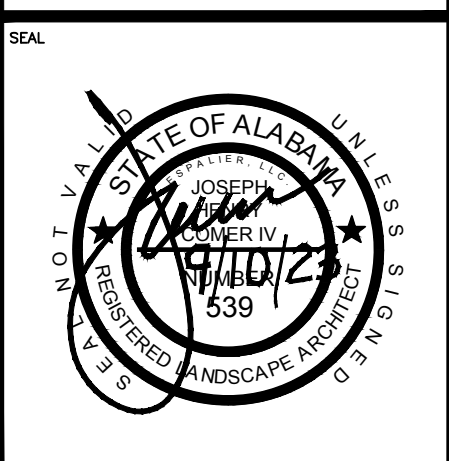
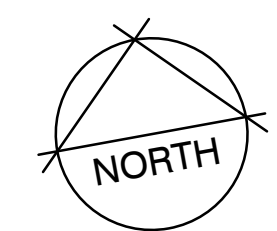
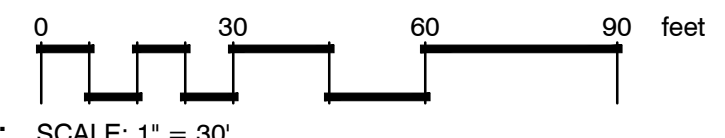


- NOTES:
1. Survey provided by owner.
 2. Field verify all layout and dimensions prior to construction.
 3. Field verify location of all structures, hardscape, utilities, drainage, vegetation, & conditions.
 4. Contractor shall be responsible for all site layout using a licensed surveyor.
 5. Contractor shall be responsible to preserve and protect all existing conditions to remain.
 6. Contractor is responsible for calling line locate and verifying presence of any & all utilities. Utilities shown are for information only.
 7. Contractor is responsible for ensuring positive drainage.
 8. Contractor shall obtain all required permits.
 9. Quantities are provided for convenience only. Contractor shall verify.
 10. Report any discrepancies to Landscape Architect immediately.

REFER TO LAYOUT SHEETS, DETAILS, & SPECIFICATIONS.



Know what's below.
Call before you dig.

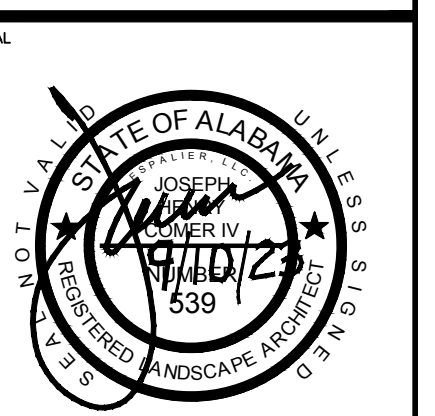


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For Bid 9/10/23

SHEET TITLE

IRRIGATION PLAN

DESIGNED BY JC	FILE NAME TRINILA
DRAWN BY JC	SHEET L-1.2
CHECKED BY JC	
PROJECT NO. 2316-2	
DATE 5/31/23	

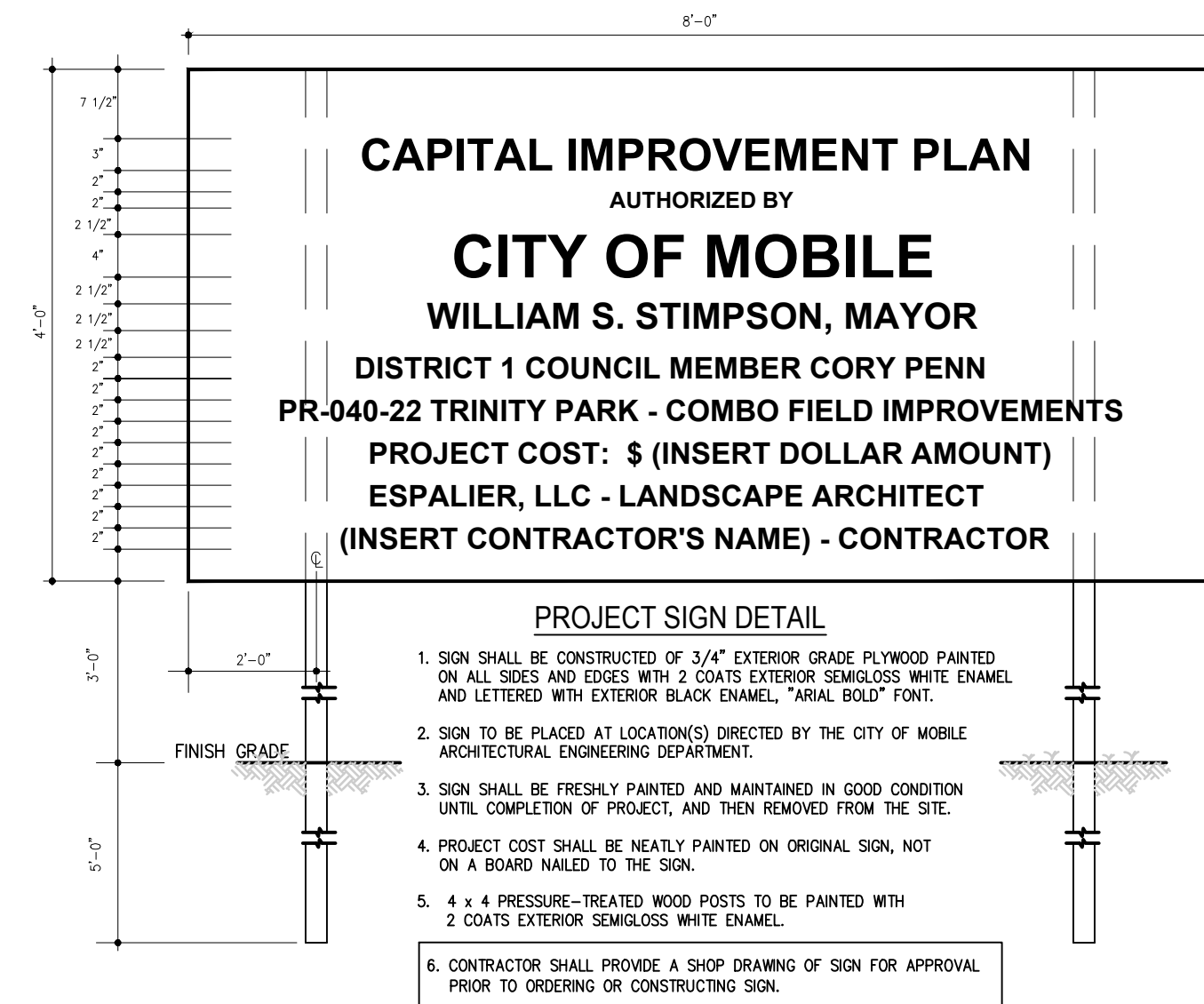


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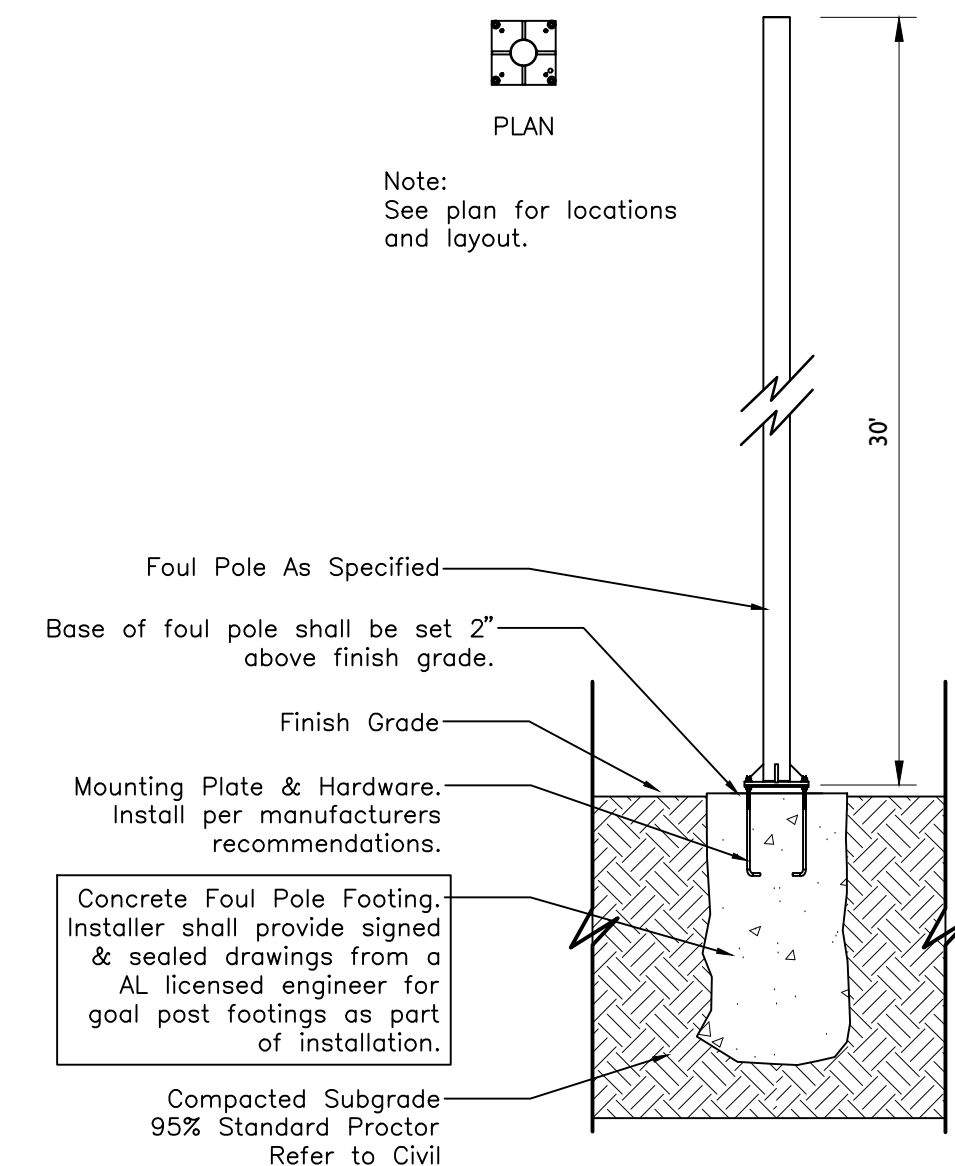
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FIELD DETAILS

DESIGNED BY: JC
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CHECKED BY: JC
PROJECT NO.: 2316-2
DATE: 5/31/23

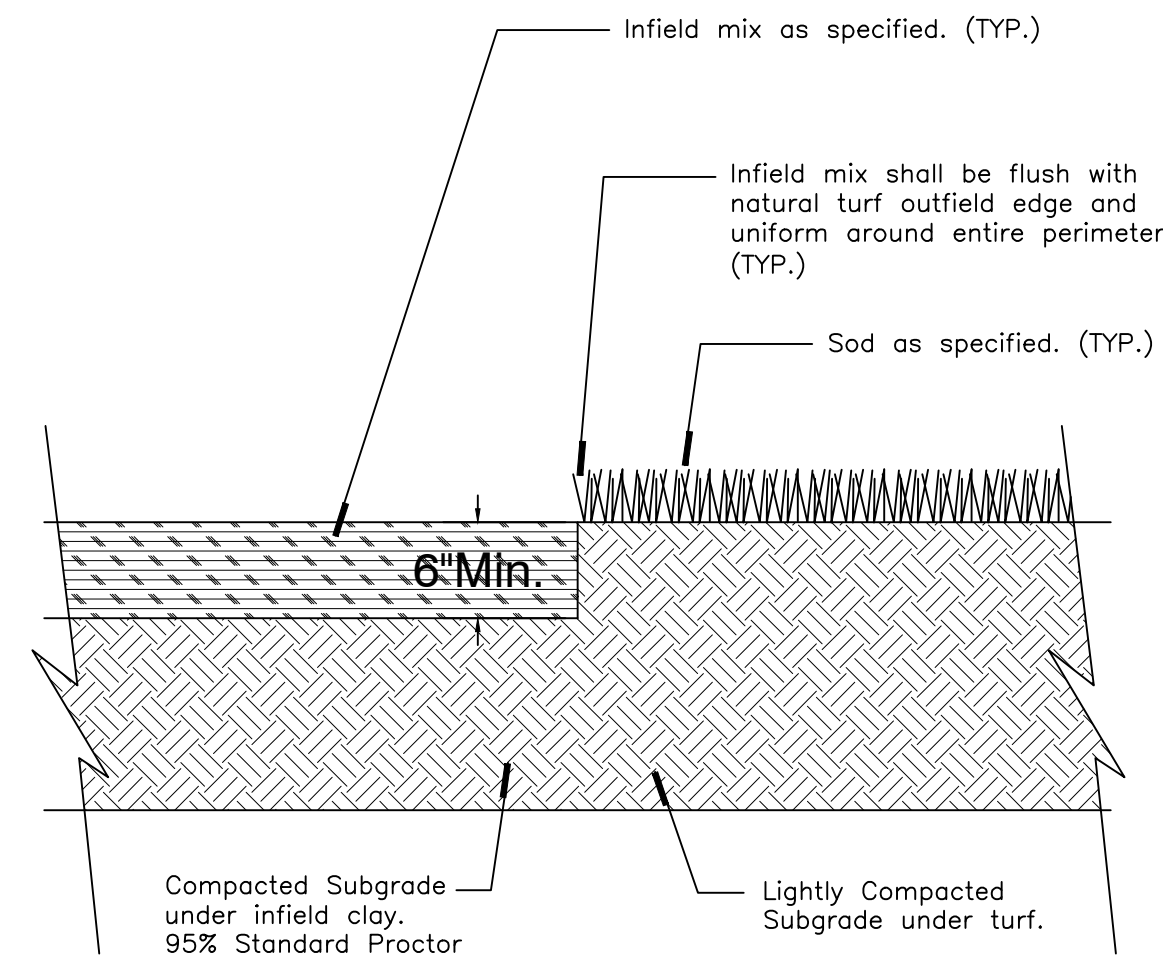
FILE NAME: TRINILA
SHEET: L-5.0



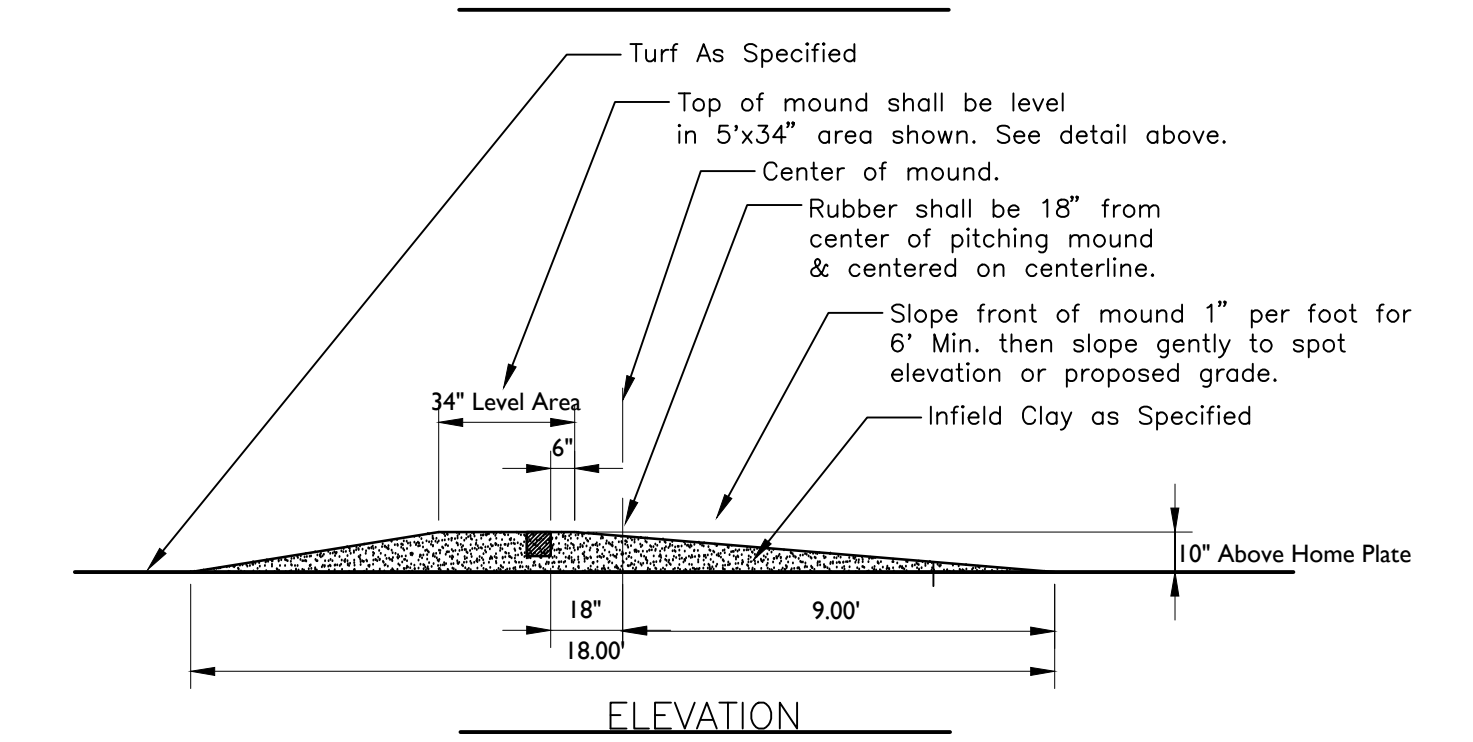
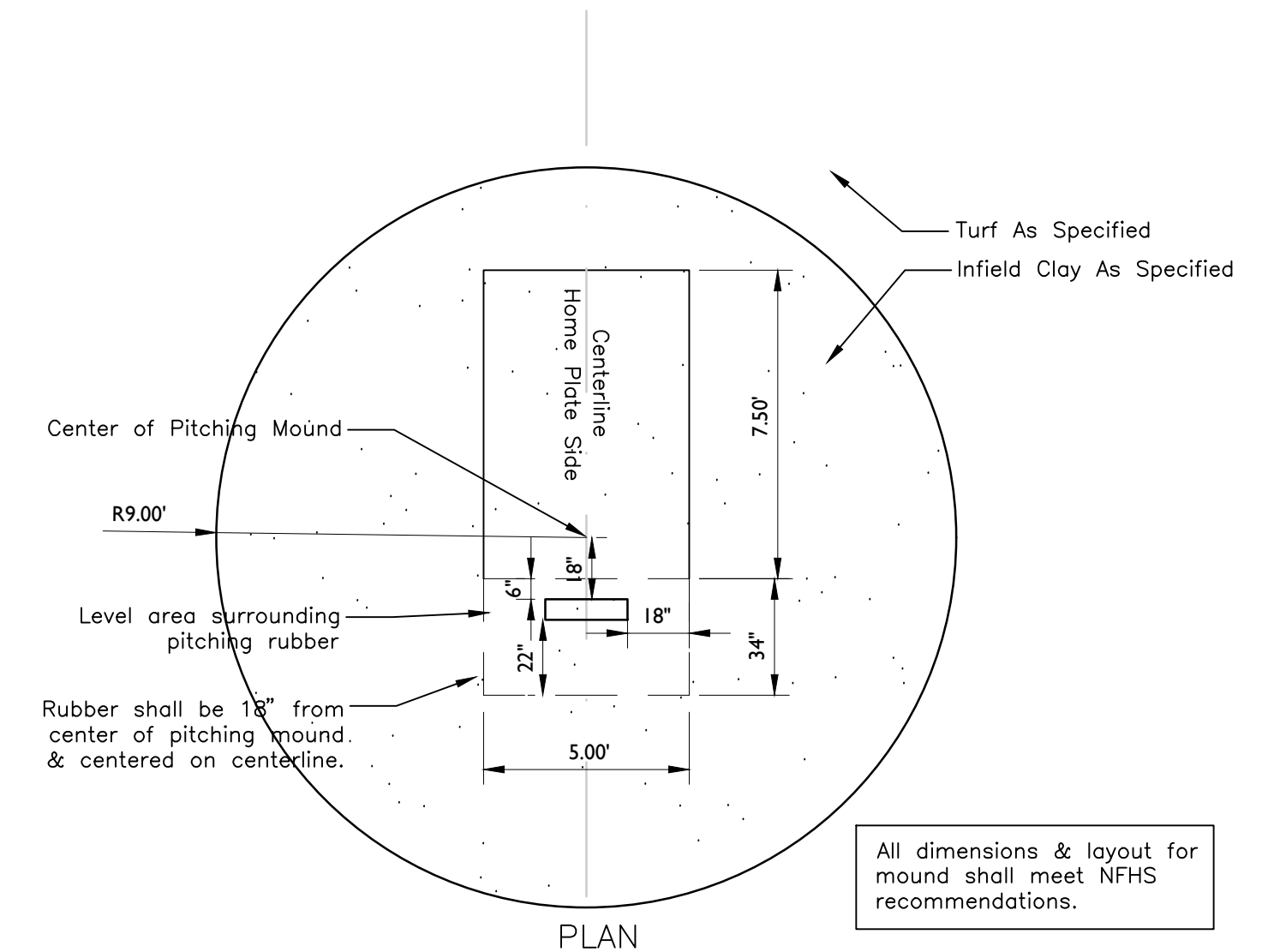
1 PROJECT SIGN DISTRICT 1
NOT TO SCALE P-CO-06



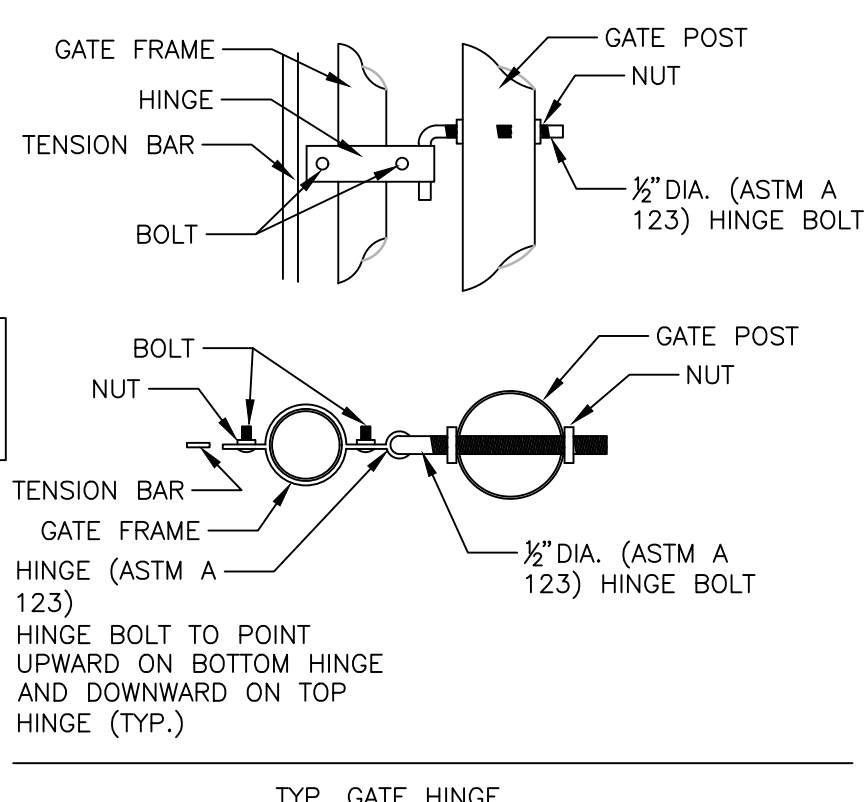
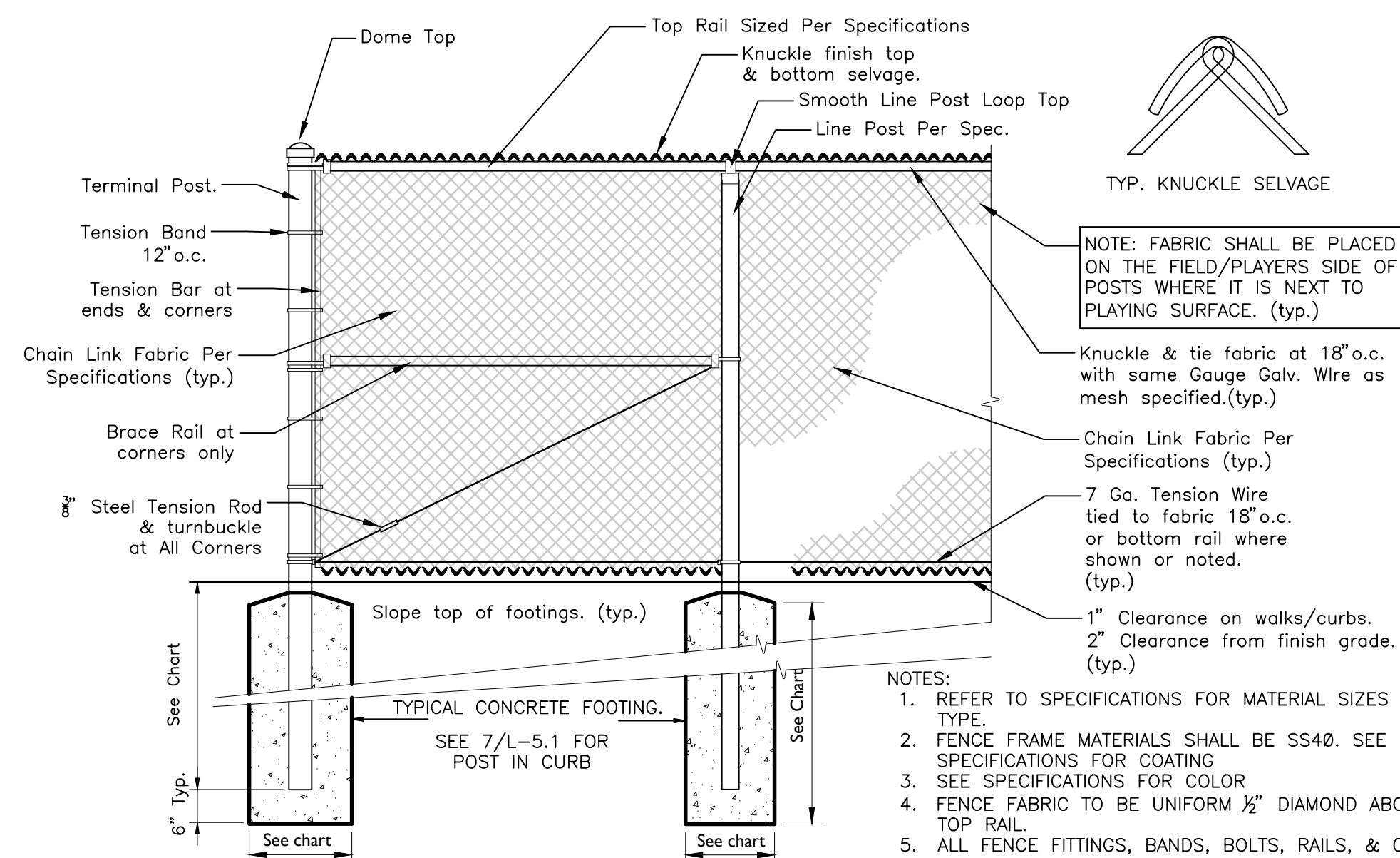
2 FOUL POLE DETAIL
3" = 1'-0" P-CO-MIM-07



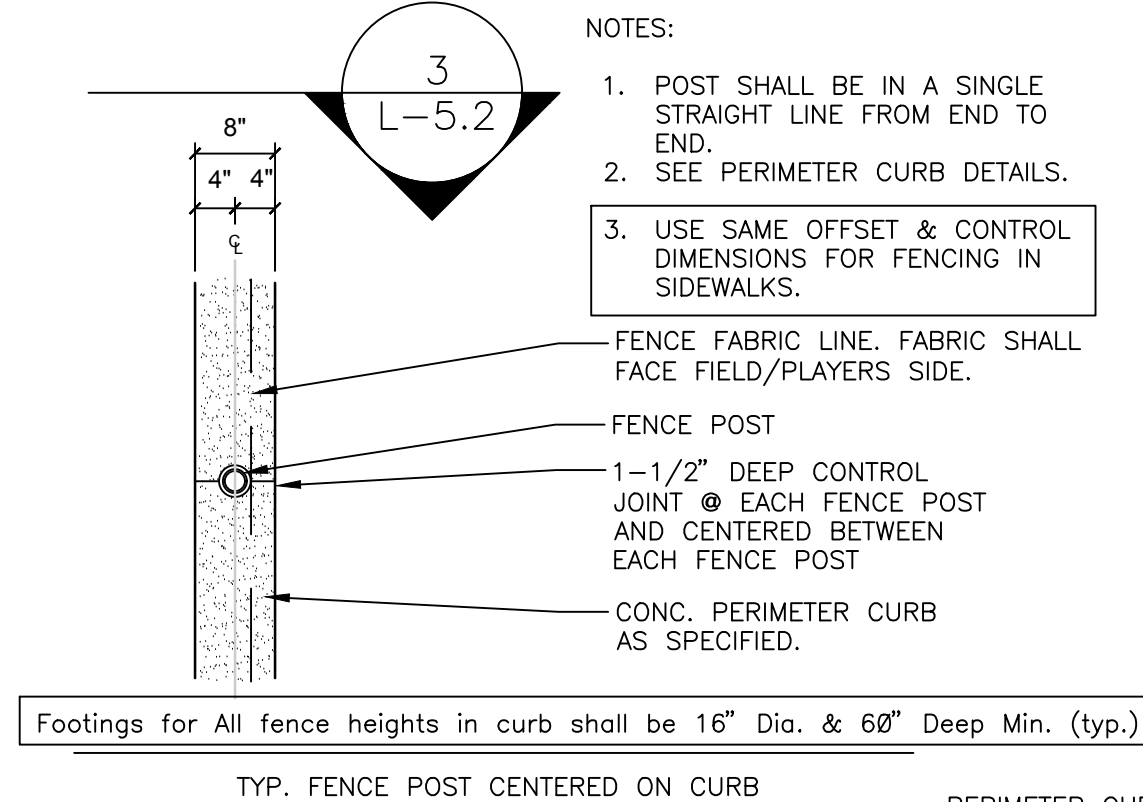
3 SKINNED INFIELD AT NATURAL TURF EDGE
1" = 1'-0" B-01



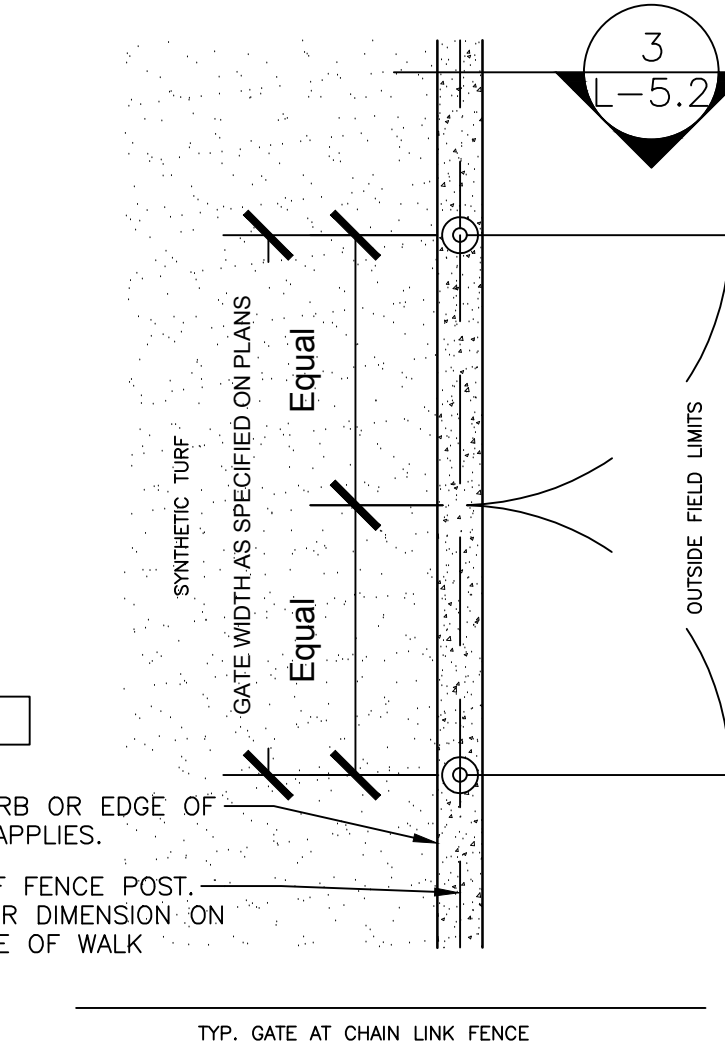
4 BASEBALL PITCHERS MOUND DETAIL
1/4" = 1'-0" B-07



	6' & 8' HT.	4' HT.
CORNER GATE & TERMINAL POSTS	3" Ø	3" Ø
LINE POSTS	2-1/2" Ø	2" Ø
TOP & BOTTOM RAILS	1-5/8" Ø	1-5/8" Ø
GATE FRAMES	2" Ø	2" Ø
FENCE FABRIC	2" SQUARE	2" SQUARE



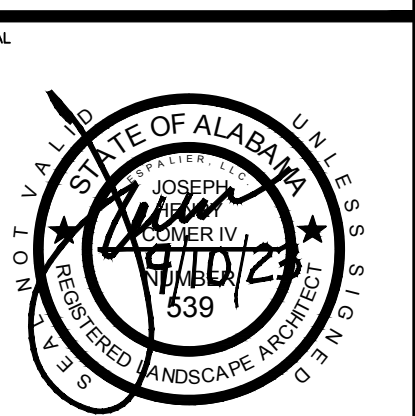
STANDARD POST FOOTING DEPTH & DIAMETER Standard Application. See notes for posts in curb.	4'-0" OR LESS		OVER 4' TO 8'	
	WIDTH	DEPTH	WIDTH	DEPTH
LINE & BRACE POSTS	8"	3'	10"	3'
TERMINAL POST	10"	3'	12"	3'



5 TYPICAL CHAIN LINK FENCE DETAIL
1/2" = 1'-0"

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P-CO-MIM-03



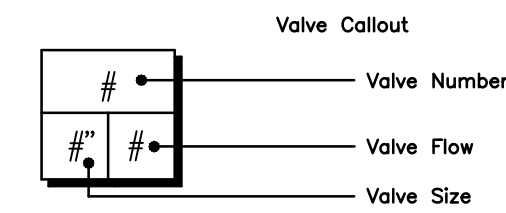
ISSUED/REVISED
98% Review 7/26/23
For Bid 9/10/23

IRRIGATION DETAILS

DESIGNED BY JC	FILE NAME TRIN1LA
DRAWN BY JC	SHEET
CHECKED BY JC	
PROJECT NO. 2316-2	L-5.1
DATE 5/31/23	

IRRIGATION SCHEDULE

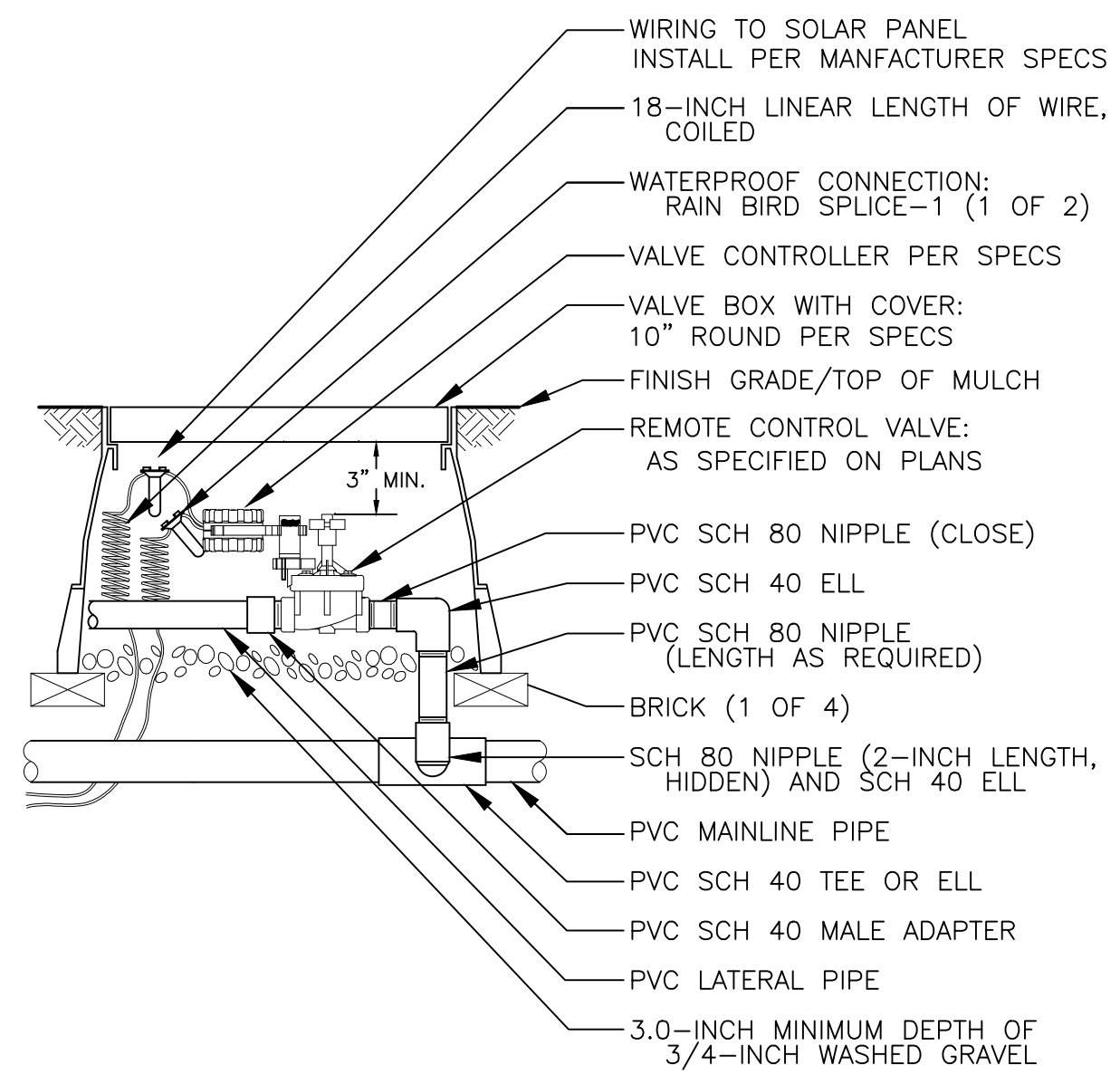
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	GPM	RADIUS	DETAIL
	Rain Bird 6504-PC, FC 12 Turf Rotor, 4.0in. Pop-Up, Plastic Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1in. Female Threaded Inlet.	40	70	13.2	59'	
	Rain Bird PEB 1-1/2" 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. Install in Carson or Equal 10" Round Valve Box with LOCKING lids. All control wiring shall be single strand 14 Gauge Min., 12 Gauge Ground. See detail.	8				
	Rain Bird 5-RC 1" 1in. Brass Quick-Coupling Valve, with Corrosion-Resistant Stainless Steel Spring, Thermoplastic Rubber Cover, and 1-Piece Body. See detail. Locate as close to fence as possible.	2				
	PVC Ball Valve Size to Match water supply.	1				
	Rain Bird ESPBXM-LXMM 8 Station Capable Commercial Controller. Mounted in a Rainbird Locking Powder-Coated Metal Cabinet. This contractor shall provide dedicated 120V circuit off of existing power panel by licensed electrician. Confirm mounting location with Owner/LA.	1				
	Point of Connection Tie into existing 2" mainline. Contractor shall verify water supply capacity prior to any work.	1				
	Irrigation Lateral Line: PVC Class 200 SDR 21 1"	1,130 Lf.				
	Irrigation Lateral Line: PVC Class 200 SDR 21 1 1/4"	591.0 Lf.				
	Irrigation Lateral Line: PVC Class 200 SDR 21 2"	296.9 Lf.				
	Irrigation Lateral Line: PVC Class 200 SDR 21 2 1/2"	96.5 Lf.				
	Irrigation Mainline: PVC Schedule 40 2"	836.7 Lf.				
	Irrigation Mainline: PVC Schedule 40 2 1/2"	467.5 Lf.				



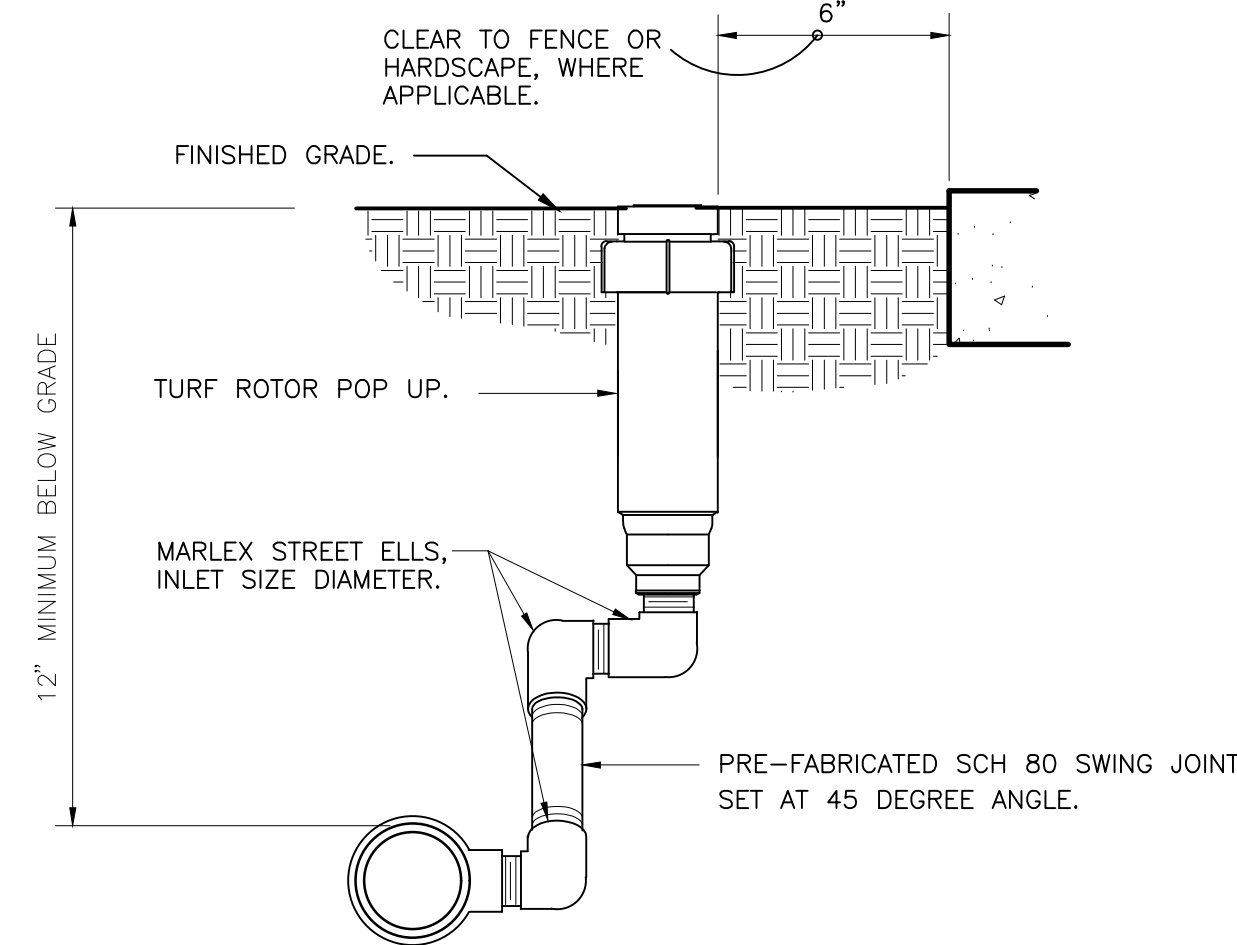
NOTES:
1. QUANTITIES ARE FOR CONVENIENCE ONLY. CONTRACTOR TO VERIFY.

IRRIGATION NOTES:
1. CONTRACTOR TO VERIFY METER CAPACITY.
2. SYSTEM IS DESIGNED ASSUMING 70 GPM @ 75 PSI IS AVAILABLE.
3. CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT BEFORE INSTALLING ANY IRRIGATION IF AVAILABLE CAPACITY DOES NOT MEET DESIGNED FLOWS.

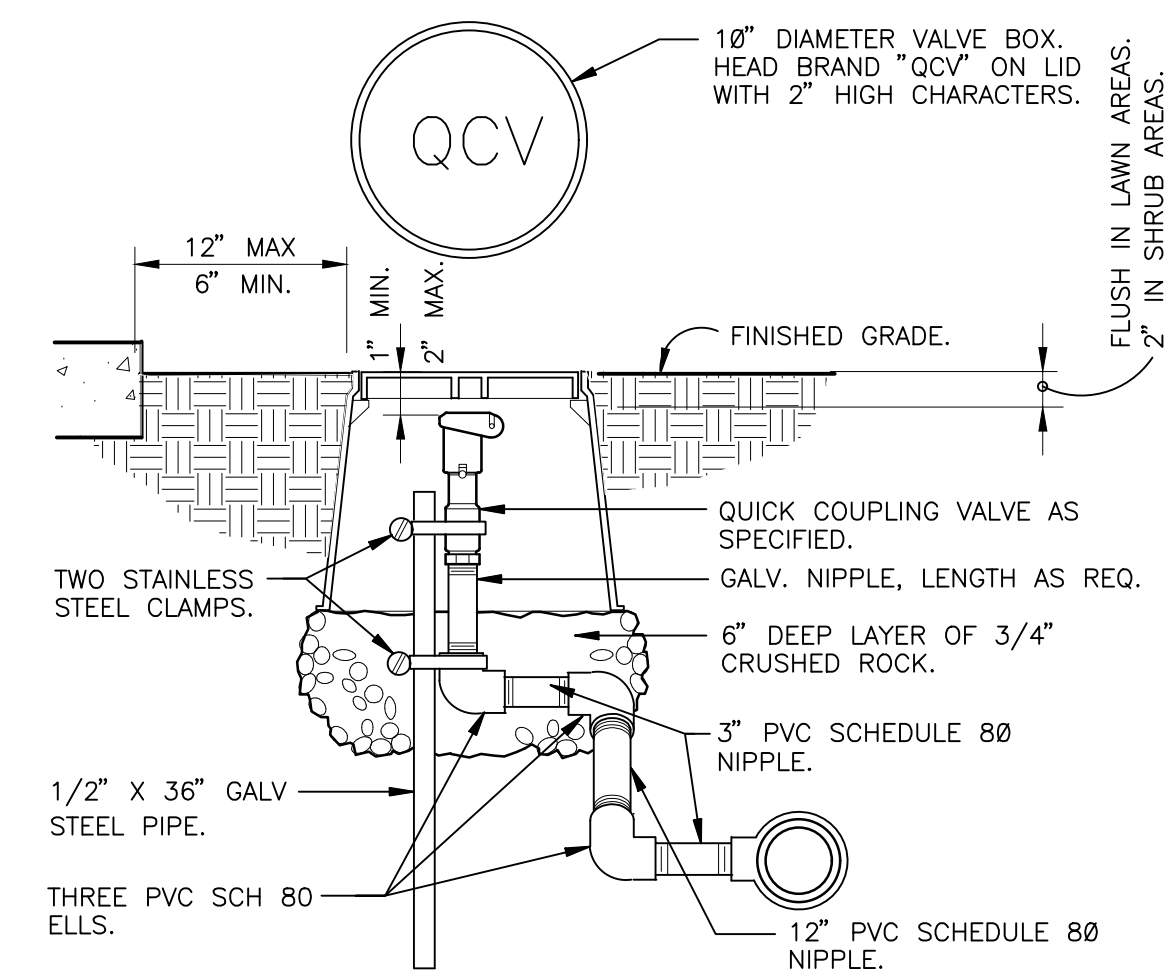
IRRIGATION SYSTEM WILL NOT WORK PROPERLY IF DESIGNED FLOW AND PSI IS NOT MET.



1 ELECTRIC REMOTE-CONTROL VALVE - BATTERY
N.T.S. IR-15



2 TURF ROTOR MARLEX ASSEMBLY
3" = 1'-0" IR-03



3 QUICK COUPLING VALVE IN BOX
1 1/2" = 1'-0" 328406.43-02

IRRIGATION NOTES

1. THIS PLAN IS SCHEMATIC IN NATURE. LINES/MATERIALS ARE DRAW OFFSET FOR CLARITY. INSTALL ALL IRRIGATION LINES IN LANDSCAPED AREAS OR AS NOTED ON PLANS.
2. REFER TO LANDSCAPE PLANS TO AVOID TREE ROOTBALLS AND TO INSTALL HEADS IN APPROPRIATE LOCATIONS.
3. ADJUST ALL NOZZLES TO PREVENT OVERSPRAY ON PAVING, WALLS, BUILDINGS, WINDOWS, ETC.
4. SET SPRAYS AND ROTORS FLUSH WITH TOP OF MULCH OR TOP OF SOD LEVELS.
5. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR CALLING LINE LOCATE AND AVOIDING ALL UTILITIES. DAMAGED UTILITIES SHALL BE REPAIRED AT NO COST TO OWNER.
6. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, LICENSES, AND ASSOCIATED FEES.
7. IRRIGATION CONTRACTOR SHALL ABIDE BY ALL FEDERAL, STATE AND LOCAL BUILDING CODES AND LAWS.
8. MAINLINE TO BE BURIED A MINIMUM OF 18", AND LATERAL LINES 12" MIN.
9. ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE AGAINST ALL DEFECTS IN EQUIPMENT AND WORKMANSHIP.
10. CONTRACTOR TO PROVIDE IRRIGATION AS-BUILT DRAWING PRIOR TO CLOSEOUT ALONG WITH ALL OWNERS AND OPERATION MANUALS.
11. NO WORK SHALL TAKE PLACE IN THE R.O.W. WITHOUT APPROVAL OF GOVERNING AUTHORITY.

4 IRRIGATION NOTES
NTS IR-12

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